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ORIGINAL ARTICLES.

PATHOLOGICAL HEREDITY AND CONGENITAL ABNORMALITIES OF THE TEETH.

Read before Section on Dental and Oral Surgery, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

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Heredity is that force by which every organism, plant or animal is formed in the likeness of, and is the counterpart, more or less exact, of the parent forms which produced it. Its external form and features, its internal organs and tissues, are copied after the type of the species to which the organs belong, and all its distinguishing peculiarities are characteristic of that species. There is a law of type which governs the evolution of every molecule, the placing of that molecule in the building of tissues, the arrangement of those tissues in the growth and position of organs in the construction of the individual, so that it shall be a typical, representative organism. That law is heredity.

It is not in the field of the normal physiological operations of this law, that we wish to study it at this time; but rather to inquire briefly into its workings when influenced by abnormal conditions, its pathology, and that as especially manifested by abnormal development of the teeth and their environments. There has long been a conviction in the minds of the scientific men of the profession, that causes of defective tissual formation of the teeth must be sought for farther back than the life history of the individual; and that in the pre-natal influences governing tissual character and quality, will yet be discovered many of the forces dictating those variations from normality in dental evolution which are so interesting, but too often most disastrous in their effects upon the arrangement and quality of the teeth.

Like all other organs and tissues, the development of the physical peculiarities of the teeth is under the control of omnipresent hereditary influences, immediate and remote. In no class of organs is the effect of inheritance by variation due to changed conditions so marked as in the teeth of man. For instance, being peculiarly susceptible to the effects of use and disuse, they have, by the protracted influence of disease weighing upon and retarding their proper development for generations, become so defective and incomplete as to approach the condition of rudimentary organs in man, to a considerable degree. The third molar or wisdom tooth, especially, is altogether rudimentary and is hastening towards extinction. It is always defective, owing to deficient structural integrity, is often a dwarfed rudiment in size, and is frequently absent altogether, from mere failure to erupt, or perhaps to develop at all in the jaw.

In man, transmitted variations are now under the domination of that artificial life with which he has surrounded himself. He is far removed from a state of nature in the environments of civilization, and as a result the variations at present in progress in the species are rather detrimental than beneficial to his physical perfection and normal integrity of structure. This is especially noticeable in the tendency to transmit imperfections and disease, so conspicuously manifested in civilized man to-day. And through the laws of and the persistence of disease and defectiveness, the teeth are the unfortunate recipients of a legacy of imperfections in varied forms. In many other tissues and organs there is a tendency to spontaneous cure by gradual elimination during transmission; but with the teeth the opposite rule obtains, for diseases of these organs seem to be augmented by transmission. Diseased malformations and defectiveness are rarely eliminated, even by the curative influence of a favorable crossing. One reason for this perpetuation of disease seems to be that, owing to the depressing effects of disease, the force of heredity is directed towards the suppression of the teeth in accordance with the law of economy of growth, and the supplemental assistance of disease is allowed in the work of destruction. Not only is the type of a tooth usually determined by the impress of one or another of the parents, but the particular defects and deformities are the result of parental impression or of unfortunate temperamental or consanguineous combinations. Immediate effects are not always of most importance, although these are often paramount to the impressions of more remote inheritance. Special defects are usually traceable to recently inherited imperfections, for, as Carpenter says, "the influence of parents on the constitution of offspring is strikingly manifested not merely in the mixture of their normal characters, but also in the tendency to hereditary transmission of perverted modes of functional activity which have been habitual in either parent. Many diseases are accounted as hereditary, and perhaps others might be added to the list. The predisposition may have been congenital on the part of the

parents or may have been acquired by themselves.

The intensification that almost any kind of perversion of nutrition derives from being common to both parents, is most markedly evinced by the lamentable results which too frequently accrue from the marriage of individuals nearly related to each other and partaking of the same 'taint.'" Or, aside from taint, even strong idiosyncrasy is frequently present which, by being intensified, may give rise to unfortunate physical or mental defects. As evidence of the correctness of these observations on varied inheritance, we have the effects of syphilis, gout, phthisis, insanity, alcoholism, etc. Regarding the effects of hereditary and transmitted disease upon the teeth, Dr. Norman W. Kingsley is an authority, and he says: "Many of the common forms of irregularity are directly traceable to inheritance and are transmitted peculiarities. Especially when it is confined to one or two teeth, the primary cause, so far as that individual is concerned, is an hereditary family peculiarity. The teeth of every person possess more or less individuality, and most of the peculiarities which stamp them are inherited. The form and color of the teeth, when not disturbed by abnormal influences, are derived from the same source. Any departure from typal form is a peculiarity of descent as well as predisposition to defect or deformity. It is a most wonderful subject for contemplation that, at some remote period in the history of our progenitors, nature departed from the normal type and produced a dwarfed lateral incisor or a twisted canine, or suppressed a bicuspid or a wisdom tooth; and following down the line of descent we find precisely the same peculiarity appearing and reappearing, perhaps not in the same line, but in the same family." As corroborating these observations, we notice that children frequently have the same defects upon the same teeth that the parents had, and that they become carious and are lost at the same age; or, owing to the increased ratio of defectiveness by inheritance so apparent in the teeth, are lost earlier in the child. A mild defect of shape or contour, an extra cusp, a lingual fold upon the anterior teeth, total suppression of a tooth (as of a lateral incisor), the occurrence of caries in the same location, dark and imperfectly calcified spots similarly located in parent and child—all these and other defects and abnormalities of the teeth are often traced through families.

The workings of the law of atavism often produce good results by causing the reappearance of a good denture in a family in which the teeth have long been imperfect and defective, with a prospect of its transmission and the elevation of the family type. But, on the other hand, atavism also allows of the reappearance of a denture comparatively bad in a family which has good teeth, and with the danger of perpetuation. Sometimes there is a blending of the types of two or more ancestors in the same individual—the front teeth representing a good organization of one parent and the back teeth the strumous, phthisical, etc., of the other, or *vice versa*. These combinations vary infinitely and are apparently due to conflict of tendencies and the compromise of opposing elements. Sexual limitations are also met with in all forms of hereditary diseases, and are more strongly pronounced in those diseases affecting hereditarily the skin and its appendages. Thus abnormal deficiency or excess of the hair is apt to be accompanied by deficiency of the teeth and to follow in one sex. Peculiar malformations, malpositions and absence of the teeth often occur in the male line—perhaps more often than in the female. Sometimes hereditary caries is limited to one sex in a very decided manner. But in immediate descent the inheritance of form, color, quality and defectiveness of the teeth, is far more likely to be in reverse order as to the sexes.

The son most frequently inherits the dental, as well as the other physical peculiarities of the mother, or failing here, through avatism he receives those of her father or of *his* mother. The daughter, on the other hand, presents most frequently the characteristics of her father or of his maternal ancestors. This is the law of reversal by sexes, and is largely prevalent in all transmissible peculiarities, abnormal as well as normal. It is often observed in the transmission of disease from mother to son, or from father to daughter, the child of the same sex as the diseased parent escaping infection.

Pathological heredity in relation to the teeth refers to disturbances of function which eventuate in defective dental development from causes received from parental impress. The study of the pathology of dental embryology is now largely concerned with the investigation of the effects of transmissible diseases which directly affect the growing tooth germs, and their deleterious influence is now a well recognized fact. Some observers claim that defective enamel is caused by acid fluids acting upon it during eruption, but the evidence is yet upon the side of the congenital and follicular effects of disease. As Magitot says, "if the alteration were chemical in its nature, there would be no change in the centre of the organ, but this is always present. Congenital lesions of the teeth, fissures, erosions, etc., are exclusively due to disturbances of dentinification and belong to the history of the follicular evolution."

When we contemplate the whole field of pathological heredity, of disease and predisposition to disease transmitted, of all kinds of debility and enervation so prevalent and transmissible, we cannot wonder that the teeth are so often defective, but rather that they are ever normal in any respect. Most diseases affect the tooth germs, or other tissues and organs, in a particular way, so that peculiar markings are produced which are more or less characteristic and pathognomonic. Some of these markings, as those of syphilis notably, have a positive diagnostic value to the pathologist. Hereditary diseases inducing functional perversion cause abnormal constitutional conditions called *diathesis* or *cachexia*, and which are graded in intensity from a mere "taint" down to a state which is positively pathological and diseased.

Persons inheriting constitutional taint, vitiated by diseased nutrition, have the entire system impressed in formation and saturated in life, by the toxical element of the disease. This element degrades and deforms the development of tissues and organs, per-

verts the physiological activities during life, and depresses the creative powers. The fœtus which inherits such an influence is under the domination of a vicious power which retards perfect evolution, and with a special tendency oft times to the injury of special tissues or special classes of organs and tissues. The developing teeth being so sensitive to all kinds of disturbing influences—for hereditary diseases affect primarily the skin and its appendages and related tissues—are most readily affected by the controlling vice. Markings are often left as a permanent legacy of the disease which, as in the case of syphilis and gout at least, are of pathognomonic value. Other diseases, as phthisis, scrofula, struma, etc., leave markings which have a less positive value, for their features are not yet certainly identified; and there are many others which may affect the teeth during development, of which we know little, but suspect much.

The "Prince of Diseases," syphilis, holds a first place as a prime cause of disturbances of dental evolution. The destructive and lasting impressions it leaves upon the teeth in embryo are unparalleled in pathological history, for when it affects the tooth germs severely, it produces teeth of hopeless deformity. Much discussion has been indulged in by authorities as to its various signs, which are too familiar to be recapitulated here. We need only call attention to the fearful effects of this great lesion as illustrating the disturbing influence of hereditary disease. Gout, scrofula, struma, phthisis, etc., also produce teeth more or less characteristic as furnishing evidence of this power. When these and kindred diseases and their resultant cachexia are thoroughly investigated, perhaps positive signs can be tabulated as accompanying each of them, but our knowledge is yet insufficient. Suffice it that they do disturb formation and produce defective teeth, as do also many of the acute maladies of infancy.

An interesting branch of this subject is the study of the effects of *racial* crossing, miscegenation, upon the arrangement and structure of the teeth. We know that persistence of the peculiarities of race is one of the wonders of heredity, and that by its powers the permanence of racial characteristics is rendered possible. Races of men exist to-day whose ethnic features have remained unchanged through centuries, and will remain, because comparative purity of race has been maintained. If racial persistence is so strong, it is not strange that mixture of races, and the conflict of various and often conflicting and heterogeneous qualities and incompatible tendencies of structure, should eventuate in imperfect, malformed and deteriorated organization. We find this to be the case as regards the teeth in the unfortunate combination of large teeth with small jaws, first described by Dr. J. H. McQuillen, and that this is a prime cause of irregularities of various kinds.

Dr. Kingsley, in describing this familiar fact, says that "aside from disease and imperfect development, most of the abnormalities of arrangement we see are to be charged to the crossing of races, especially as found in America among our Anglo Saxon population. The persistence of race, the reappearance of external racial qualities erratically in all possible and unfortunate combinations, all contribute towards the degradation of the teeth and their environments." Mixing races always produces a deterioration of physical perfection, as a first result of crossing, and this, of course, is a prime cause of degeneracy of dental structure as well. M. Magitot has dwelt at length on this subject in his studies of dental caries. He says that "in certain families and races caries is a frequent and habitual malady, through the transmission of certain anatomic predispositions of structure. Thus certain predispositions of dentition, as anomalies of structure, reproduce themselves through successive generations." He found that among the mixed races in France there was more disposition to caries than among the comparatively pure races. From the records of the War Department he constructed a map showing the geographic distribution of caries in France, which bore an exact relation to the ethnography of the nation; *i. e.*, the districts of the least prevalence of caries had pure races, and those having the most caries were in the belt of foreign invasions and consequent mixture of stocks.

After the first effect of crossing, *i. e.*, physical degeneracy and depressed vitality, the most important result is the confusion of typal characteristics as a cause of deformity and deterioration, consequent upon the unsuccessful efforts of nature to harmonize discordant and conflicting typal elements. It is a rule that inharmony of racial characteristics is an active cause of abnormalities of all kinds, and it follows that if pure races have the best physical development, they must have the best teeth, and which we find to be the case as a rule. But the subject is too vast to venture more than these mere suggestions. We are but upon the threshold of the subject of heredity, and especially in regard to the influence of hereditary causes as inducing imperfect dental development. As Mr. Chas. S. Tomes has recently said, "an enticing field of inquiry lies in the question of how far heredity plays a part in the genesis of dental irregularities and of dental caries. As vast a number seems quite as likely to be under the sway of distinct heredity, as is the conformation of the nose or the lips. Many families have peculiarities—a V-shaped palate, marked charcteristics and abnormalities of the teeth, etc., running through all the members. Close observation of the mouths of the children of large families in conjunction with the parents, might throw some light on the vastly wider question of heredity.

"The question of how far the child is demonstrably a mere product, showing not only the peculiarities of the parents, but bringing to light again tendencies inherited from more remote ancestors, is one of the greatest interest, for in every individual many strains of blood unite and may be expected to exert themselves, to varying extents."

As Darwin has said, "the whole subject of inheritance is most wonderful," and we may add that the wonders it presents in normal action are only surpassed by the manifestations of its power in pathological condition; for the transmission of disease is more incomprehensible than the transmission of normal structure and qualities.

CONGENITAL PHIMOSIS.

Read in the Section on Diseases of Children, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY WILLIAM S. STEWART, A.M., M.D.,

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The condition known as congenital phimosis, a contraction of the prepuce over the glans penis attended by inability of retraction, has of late called the attention of the profession to the fact of its very frequent occurrence, and being a source of discomfort and suffering and evil to the young victim.

The distress resulting from such condition continues until the force of erection of the organ involved overcomes the unnatural resistance.

The evidence of this is exhibited in the fact that most male children during their infancy are more irritable in disposition, nervous in temperament, and difficult of management than females during the same period.

In general, when there is a disturbance of any part of the body the child's hand is instinctively applied to that part; so great is the distress in this condition that he early begins to manipulate his penis, applying his hand to the organ in your presence, and for this offense his mother will perhaps rebuke or chastise him as she has frequently done, without for one moment considering that it is the natural result of a morbid condition and not due to a depraved disposition.

On investigating the condition of one of these little sufferers we find a muzzled glans, the preputial mucous membrane adhering to its entire surface with here and there embedded between them small, hard and irritating substances of a cheesy consistence, while back of the corona there is a larger accumulation.

On attempting to retract the prepuce as far as possible, its opening is found contracted to about the size of a pin's head.

This condition is so aggravating as to result in a desire upon the child's part to urinate frequently, and causes the napkin to be constantly wet, while the penis and surrounding parts are irritated and inflamed.

Examining the organ more thoroughly you will invariably find that the meatus is red and inflamed as a result of the condition referred to; there is also a scalding on urinating and the little victim will invariably cry out in the agony of the act, which will by and by attract the attention of the nurse, who, in her ignorance of the functions of the various parts of the body, will infer that the child's kidneys are affected. This fact being reported to the physician he, in his thoughtlessness, would most likely attribute it to acidity and treat it accordingly giving only temporary relief.

It is not, however, the difficulty of micturition or the accompanying pain which is to be considered, but the effect upon the general system of the pent-up penis struggling for liberty, erecting and re-erecting until it finally succeeds in overcoming the difficulty, or, until the habit of self-abuse with all its debasing and debilitating effects is brought on.

No doubt if careful observation were made many other serious attacks might be traced through reflex influence to this congenital condition.

Convulsions, which are so likely to occur during the early months of childhood, and are wholly attributed to the effects of teething, indigestion and intestinal worms, will prove by closer observation to be due, at least at times, to the excessive irritation resulting from phimosis.

Paralysis of infancy, has by still further investigation been traced to the same cause, and such has been the experience of the orthopœdic surgeon that when from almost any cause a child is brought under his care for nervous affections of any part of the body, the little fellow is examined as to the condition of the foreskin, and if it be not satisfactorily relaxed the first step in his treatment is circumcision.

I recall a most interesting case in which a child had been in convulsions for several days and under treatment by a reputable physician, who, with his bromides and chloral, was unable to afford permanent relief. When called to see him I found one side of his body paralyzed, and his power of speech gone; and still everything in the way of remedies had been assidiously given.

On inquiring into the history of the little fellow's treatment what surprised me most was that, on removing the napkin the mother did not direct the attention of the careless doctor to the condition of the child's penis as it was swollen and inflamed and on the slightest pressure there exuded a quantity of disintegrated smegma. The relief obtained by treatment of the organ gave most satisfactory evidence as to the influence of the occult cause in producing persistent convulsions.

Although an apparent paralysis had been established and the spasms were still uncontrolled, after operating upon the child and administering the iodide and bromide of potash internally the little fellow made a rapid recovery; the paralysis disappeared, his speech returned, and he did not have another convulsion from the time of the operation.

Now, as to the method of operating. Circumcision as a religious rite has been practiced by the Jews since the days of Abraham. Why it should have been imposed upon that nationality as a religious ceremony was probably the fact of the necessity. But as such a rite was not enjoined for the Christian dispensation we are not obliged to follow any prescribed Mosaic or Christian law, but be a law unto ourselves.

It is the method of operating that interests me most in appearing before you at this time; the idea of using the knife in removing any part of the body is still so repulsive to our fellow *gentile* race and particularly repugnant to parents, and especially mothers, that in order to meet this prejudice, I have been led to devise the following plan of treatment; and that you may better understand the philosophy of my method, let me first explain to you the condition of the parts.

The trouble involved is due to a contraction of the mucous membrane of the prepuce, the skin being lax

and sufficiently free. On careful examination you will find the mucous membrane adhering closely to the entire surface of the glans penis. When circumcision is performed the cutting off of the redundant foreskin does not remedy this trouble referred to, nor can the prepuce be retracted without first tearing or splitting up the mucous membrane.

What is sought after for the health and comfort of the boy is easy retraction of the prepuce so that cleanliness of the organ can be secured, and all irritating matter that has accumulated around the corona may be removed.

This I have found by experiment can readily be accomplished almost invariably as a bloodless operation, by a careful stretching of the mucous membrane with an instrument that I have devised for the purpose, which with its four expanding blades stretches the parts equally and at the same time gradually breaking up the adhesions until we uncover the anterior portion of the glans, when we are obliged to resort to the blunt end of a probe to dissect off from the glans as far back as the corona the tightly adherent membrane.

On so doing we will come across here and there over the glans small particles of hard granular substances about the size of a pin's head which have become embedded between the mucous membrane and the glans, acting as foreign bodies, and of course a source of great discomfort. When the corona is reached we generally find a layer of smegma filling the entire indenture of this part of the organ. This carefully removed, the parts oiled with some wholesome unguent, and the foreskin drawn forward the operation is complete, without a drop or at the most with only a few drops of blood, and without the necessity of a stitch or the application of any special dressing.

I will endeavor to give you an occular demonstration of my method of procedure in this operation. First, as the operation is only momentary I will not require to subject the child to the risk of an anæsthetic. But as a substitute I sometimes use a 10 per cent. solution of cocaine, applying it over the mouth of the prepuce, which results in a painless operation. After the cocaine has taken effect having placed the boy on his back on a table, we will take our position on the right side of the boy and table and with left thumb and forefinger we will grasp the side of the prepuce whilst we take the instrument in the right hand. The assistant will stand on the opposite side of the table, and will also grasp the opposite side of the prepuce and stretch it upwards and apart as much as possible to enable the instrument to be inserted into the opening. Having passed the instrument as far as possible into the orifice of the prepuce we must be careful to avoid the meatus as the urethra might be lacerated by mistake. In expanding the blades of the instrument, which I have named the "Preputial Dilator," much care must be exercised in order that the prepuce is not too suddenly and extensively stretched, so as to avoid tearing either mucous membrane or skin, for if such should happen the success of the operation is not nearly so satisfactory. It would be much better to repeat the process cautiously from time to time until thoroughly accomplished, than to be rash at the first, as it is very evident that during the healing process the tendency of the parts is to contract and therefore reestablish the original trouble.

1801 Arch Street.

EFFECTS OF OBLIQUITY OF THE CORRECTING LENS TO THE VISUAL AXIS.

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY EDWARD JACKSON, A.M., M.D.,

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The effect of a spherical lens upon a pencil of light-rays entering it obliquely has been carefully studied by Prof. E. C. Pickering and Dr. Charles H. Williams, who have recorded the results of their investigations in the *Proceedings of the American Academy of Arts and Sciences*, Vol. 10, 1874–5, p. 300. Dr. G. Hay, in a paper "On the Increase of Refractive Power of a Plano-Cylindrical Lens when Rotated about its Axis," in the *Transactions of the American Ophthalmological Society* for 1875, p. 319, has given the results of a similar study with reference to cylindrical lenses.

In these papers the mathematical questions arising in connection with this subject are clearly and exhaustively discussed. But the only practical applications made of the law developed, is, in the former paper, a reference to its importance in the correcting of wide-angle photographic lenses, and in the latter, the suggestion of an apparatus for the measurement of astigmatism. A recent paper on the subject in the *American Journal of Ophthalmology*, by Dr. S. M. Burnett, equally neglects the extremely important practical aspect of the subject.

Briefly, the placing of a lens so that the incident pencil of rays enters it obliquely increases its refractive power. The cylindrical lens acts simply as a stronger cylindrical lens; but with the spherical lens the increase of refractive power is greatest in the meridian in which the obliquity is measured, so that it comes to act as a sphero-cylindrical lens, with one principal meridian in the direction of the obliquity, and the other perpendicular to it. Thus, if a convex lens is revolved about a vertical axis so that a pencil of horizontal rays strikes it obliquely, its effect upon the pencil will be that of a stronger convex spherical lens combined with a convex cylindrical lens with its axis vertical.

Tables showing the effect of given degrees of obliquity are given by Pickering and Williams. I have

confirmed the approximate accuracy of these tables both by calculation and empirical tests. They are sufficiently accurate for all practical purposes, with glass having a refractive index 1.54, which is about that of the glass used for spectacle lenses.

The following table, based upon the data of Pickering, and Williams, and Hay, gives in the first column the various degrees of obliquity up to 40°. In the second is shown the effect on a 1 Diopter cylindrical lens; while the third gives the sphero-cylindrical effect of a 1 Diopter spherical lens equally inclined to the axis of the incident pencil:

Obliquity of the Lens.	Refractive Power of a 1 D. Cylindrical Lens so Placed.	Sphero-Cylindrical Equivalent of a 1 D. Spherical Lens so Placed.
0°	1. D. cyl.	1. D. spherical.
5°	1.01 "	1.00 sph. ◯ 0.01 cyl.
10°	1.04 "	1.01 sph. ◯ 0.03 cyl.
15°	1.10 "	1.02 sph. ◯ 0.08 cyl.
20°	1.17 "	1.04 sph. ◯ 0.13 cyl.
25°	1.30 "	1.06 sph. ◯ 0.24 cyl.
30°	1.44 "	1.09 sph. ◯ 0.36 cyl.
35°	1.69 "	1.12 sph. ◯ 0.56 cyl.
40°	2.01 "	1.16 sph. ◯ 0.83 cyl.
45°	2.46 "	1.22 sph. ◯ 1.24 cyl.

It may be noted with reference to this table that the cylindrical effect increases more than the spherical, and that both increase more rapidly the higher the degree of obliquity.

For instance, a 10. D. spherical lens with an obliquity of 10° shows an accession of spherical refraction of only one-tenth of 1 D., and of less than one-third D. of cylindrical effect. But making the angle three times as great, 30°, the spherical is increased almost 1. D., and the cylindrical amounts to more than three and a half D.

Dr. Thomas Young proposed to correct his own compound myopic astigmatism by the proper spherical lens placed obliquely before his eye. Evidently such an arrangement is only possible when the spherical lens employed is considerably stronger than the cylindrical effect required. It has, however, been resorted to from time to time by those using strong convex or concave spherical lenses. The device being generally accidentally discovered by the wearer of the glasses, who finds that by holding the object in a certain position, that is, so that his visual axis and the pencil of incident rays shall strike his glass with a certain degree of obliquity, that he can see it more distinctly than anywhere else.

Within a month I was consulted by an old gentleman whose left eye was useless, with a pterygium extending on to the inner portion of the cornea of the right. He read with a convex 5. D. spherical, holding the page very close to his face, and so far to the left that he could barely see it above the bridge of his nose. In this way he was able to very nearly correct the 3.50 D. of hyperopic astigmatism, axis vertical, which I found on examination. This method of correcting astigmatism is, however, quite inferior to the use of the sphero-cylindrical lens. Because, unless the amount of astigmatism is so slight as to make its correction very unimportant, the glass must be so much inclined that a very slight difference in the inclination will greatly vary the cylindrical effect, making it necessary to always bring the object to a certain position in order to see it clearly; and thus greatly narrowing the available field of vision. Suppose a patient had a compound myopic astigmatism requiring for its correction a — 3. s ◯ — 1. cyl. axis 180°. With such a lens the patient could turn his visual axis 15° from the perpendicular to the lens, either to the left or right, or up or down, giving a field of vision of 30° in any meridian without seriously changing the refractive effect of his glass. But if, as myopes not rarely do, he obtained his cylindrical effect by canting the lenses forward, he would have to make their obliquity to the visual axis equal 30°; in which case a deviation of the axis 5° either upward or downward will very greatly impair the accuracy of his correction.

When we find a patient who can see better by looking through his glasses obliquely, we should never rest with that correction; but by the aid of the table given above, and careful testing, should search out the sphero-cylindrical equivalent of the obliquely placed lens; and give the patient the benefit of the larger, accurately corrected, visual field; and the lesser liability to transgress its limits.

Among systematic writers I believe Landolt alone has directed attention to the importance of care as to details in the mounting of lenses before the eye; and he has by no means exhausted the subject, especially in this direction. The greater care to avoid undesired cylindrical effects is of course needed with the stronger lenses. For distant vision the lens is to be mounted with its surfaces nearly coincident with the plane of the face, making due allowance for any peculiar habit of position; while for near work, done at a lower level than the eyes, the front surface should look downward and forward.

Where a single lens is used for both near and distant vision, its position must lie midway between what would be the best positions for either near or distant visions alone. Here the advantages of strongly periscopic lenses would be manifest. The perfect periscopic lens, in this respect, would be one having the centres of curvature for both its anterior and posterior surfaces as close as might be to the centre of rotation of the eye. Sometimes where the one lens must be habitually used with the visual axis in widely varying positions, it may be worth while even where there is no astigmatism, to add a weak cylinder, with its axis corresponding to the plane in which the visual axis moves, in order to correct the cylindrical effect that will be caused at right angles to this. When bifocal or divided lenses are employed their position should also be between the proper positions for near and distant vision. But instead of midway between should be much nearer the proper position for the stronger glass. Thus with convex bifocals the glass for near work being the stronger, they should look more downward; with concaves the distance glass being the stronger they should look more forward. Better still, as has some-

times been done, they may be mounted in a frame which has an angle where the two parts come together, so that each may be given just its proper direction.

But perhaps the most important practical lesson to be learned, from a study of the effects of obliquity of the correcting lens, is an illustration of the necessity for accuracy in the determination and correction of ametropia particularly of myopia. To place before an eye a lens that does not accurately meet its needs, may by inducing the patient to look obliquely through it, and so to encounter the cylindrical effect, prove quite disastrous for the patient.

Chas. J., æt. 21, came to me recently with evidences of eye-strain, headache, pain in the eyes, choroidal congestion and commencing conus. He was wearing right and left —4. D spherical that I had ordered for him four years ago and which had been worn most of that time with comfort. But he now believed he had some astigmatism; saw with different degrees of distinctness, lines running in different directions. *To see clearly objects a little way from him, he would twist his head to one side and look obliquely through his glasses.* This maneuver gave him V. = $\frac{15}{XV}$ mostly; while looking directly forward he saw but $\frac{15}{XX}$ partly. Under a mydriatic his symptoms of eye-strain promptly disappeared; it was found that during the four years his myopia had increased 0.75 D. in each eye. Such an increase may have been due to a strictly physiological development of the globe; but the effort to see clearly with his imperfect correction caused all the symptoms of an aggravated astigmatism. The obliquely placed lens caused an astigmatism of the incident pencil which varied continually and allowed the establishment of no constant compensatory accommodative effort.

I fear that many ophthalmologists regard it as a small matter to leave a little myopia uncorrected, or think it rather a good thing to do, because it saves a little effort of accommodation. I believe that for reasons above indicated it is dangerous; and could detain you longer with the citation of cases that would illustrate and enforce my point. As spectacle lenses are usually fitted and mounted, it is quite possible to get by looking through the edge of the lens an obliquity of the incident pencil either upward or downward of 25° or 30°, and to the right or left of from 30° to 40°. Now a glance at the table will indicate how much increase of spherical refraction accompanied by astigmatism can be obtained, by such an obliquity, with a strong lens. And if, as many, especially Thomson and Green, have argued, astigmatism be especially dangerous to the myope; it cannot be doubted but that the temptation to thus secure better distant vision is also very dangerous.

The myope with a partial correction shares this danger, with the presbyope whose glass is insufficeint for near work and who strives to shorten its focus by looking through it obliquely; and the two constitute the best and most common examples of the dangers of using lenses not wisely selected.

Another very practical application of our knowledge in this direction, is in warning patients, especially such as use strong lenses, always to look through the center of the glass. And in this law governing the action of lenses we may find a partial explanation of that difficulty which Landolt so graphically portrays, in satisfying our cataract patients with the optical substitute for the crystalline lens.

PATHOLOGICAL CONDITIONS OF THE TEETH AND THEIR SYSTEMIC EFFECTS.

Read before the Section of Dental and Oral Surgery, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY K. B. DAVIS, M.D.,
OF SPRINGFIELD, ILL.

This subject is one of great importance, not only to the dentist but to the oculist and the general practitioner of medicine. Important as it is, however, it has not heretofore received that attention from medical writers, and practitioners that it justly merits. That pathological conditions of the teeth and the structures adjacent to them in the oral cavity, do exert a most pernicious influence upon the general system, is a fact as well established as any other medical observation. Yet I fear there are too many practitioners that almost wholly ignore these conditions as causes of many systemic disturbances.

The attention of the profession was recently called to this subject, by the New York *Medical Record*, in which Dr. Samuel Sexton, a distinguished oculist and aurist of New York City, and the editor of the *Record*, were the principal writers.

The *Medical Record* of October 4, 1884, contains a report from the aural service of Dr. Sexton, entitled "Pain in the Ears, due to Irritation in the Jaws." He describes a number of cases of otalgia, in which he found the lesion to be in diseased teeth.

The same number of the *Medical Record* contains an editorial on "Dead Teeth in the Jaws," which reads as follows: "Perhaps the time is near at hand when medical men should be themselves better informed concerning diseases of the jaws and mouth, rather than refer the ailments of this region to individuals whose limited knowledge of medicine does not prevent them from "treating" dead teeth long after their presence in the jaws has given rise to alveolar abscesses and neuralgias, more or less painful. It would not be strange if in the course of events, the day would soon come when all teeth without pulps, and hence, in process of more or less rapid decay, as well as those which the deposit of tarter or other cause, had entirely divested of periosteal nourishment, would be promptly condemned as unfit to remain in the jaws—regarded in fact as foreign bodies, liable to give rise, not only to cerebral irritation and diseases in the organs of special sense, through the propagation of local disturbances in the mouth, to the regions mentioned, but to endanger likewise the general health, through purulent matter discharged into the mouth from alveolar abscesses, to be continuously swallowed for a long time, or, indeed, in some instances, to be absorbed, and thus produce septicæmic poisoning. It is certainly grati-

fying to note the establishment of instruction in oral surgery in some of the schools, and it is to be hoped that this subject will receive the attention its importance demands."

Considering the peculiar structure of the teeth and their relation through the nervous system to the general organization, the close connection existing between the teeth, the rapidity with which the flash of sympathetic pain darts along the nervous cords which vitalizes them, the intolerable and protracted suffering which ensues, upon even trifling irritation of these sensitive filaments, and remember that pain itself is fully capable of deranging the whole economy, and inducing serious and fatal disorders, we might, without the aid of much reflection, adopt the very rational conclusion that the diseases of the teeth must be of considerable consequence to the entire organization. We must also remember that the teeth were not made merely for ornament, but to perform certain specific functions, chief of which is mastication and insalivation, and that these are something more than mere forms of introduction to the stomach, that they are important to digestion, which is important to the entireness of organs, and the performance of function, and that if mastication and the insalivation accompanying it be imperfectly performed, some corresponding imperfection of digestion must result. We also know the consequences of long continued morbid influences, however unimportant in their immediate action, that disturbance of digestion constantly repeated must sooner or later develop evils of a most serious character.

The teeth are not as some seem to suppose, isolated organs, but they have an intimate and vital connection with the whole nervous system, and when the extremities of the nerves are exposed to irritation, whether by wounds of flesh or by decay of the teeth, there is a reaction upon the nervous centres, and various morbid conditions are a necessary consequence.

Mastication is doubtless the primary function of the teeth, and should these organs be unable from decay or other morbid causes, to perform this office, the stomach is called upon to perform a double function, that of mastication and digestion; and while thus compelled to do its own work and that of the teeth also, it is much more liable to become disordered, and consequently the whole system may become deranged. A stomach treated in this way for a considerable length of time must inevitably suffer. But it is possible that some other organ may first indicate functional disturbance. But should indigestion ensue from the effects of a morbid condition of the oral cavity, this deranges and impairs the whole system of nutrition and innervation, and sets to work a horrid train of morbid conditions. that render even existence itself almost intolerable.

All of us, doubtless, are frequently called upon to witness the mouths of patients whose teeth are nearly all decayed, and many of them afflicted with alveolar abscesses, the gums inflamed and receding, extremely irritable and painful, the glands of the mouth disordered, the breath fetid, the saliva corrupt and extremely unhealthy; the teeth are in such a morbid condition that they cannot masticate their food, but mumble it in their mouths, where it mingles with that corrupt and vicious saliva, and with all the fetid, putrescent accumulations in the cavities of those stumps of teeth, and in this condition it passes into the stomach, where it mingles with the gastric juice, tending to vitiate the whole process of digestion.

There are many other morbid conditions either developed or produced by dental irritation. Mr. Salter, in his Pathology and Surgery, in treating upon this subject, says: "The affections of the nervous system dependent on the teeth, divide themselves into those which are reflex, secondary and remote, and those which are direct, immediate and from contiguity. In the former category would rank epilepsy, neuralgia, paralysis; in the latter, local pain, facial palsy, some forms of amaurosis, etc. In other instances, such as the exalted sensibility of the tegumentary nerves of the face, erratic pains through the maxillary nerves, associated with tooth-ache, it might be difficult to say whether the phenomena are mostly reflex or direct; they probably comprise both conditions."

The situation of the teeth, and their abundant supply of nerves, and the great and diffuse swelling which their diseases produce in contiguous structures, inevitably involve much nervous disturbance and complication. The inferior molars are but little removed from the tonsils, and Eustachian tube, from the parotid region and the external auditory passage. The fangs of the superior molars are close to the orbit, and its all important contents; and more posteriorly they approach the spheno-maxillary fossa and fissure. Thus is it easy to account for the nervous complications which are directly entailed by the spread of inflammation from the periosteum of diseased teeth.

The several branches of the trigeminus appear to be the most susceptible of reflex affection, caused by dental irritation of one of them; but next to the different elements of the fifth nerve, the branches of the cervical and brachial plexuses are the most commonly involved—pains of the neck, shoulder, acromian process, insertion of the deltoid, bend of the elbow, are by no means uncommon, and with them occasionally a loss of motor power, a weary sense of fatigue in the flexor muscles, and an inability to grasp firmly with the hand.

Pain is only one of the phenomena of reflex dental nerve irritation. It may induce muscular spasm, *muscular paralysis, paralysis of some of the nerves of special sense, perverted nutrition.*

As regards the teeth themselves, which excite this exalted nervous irritability, nearly all their diseases appear capable of causing this condition.

Caries with or without exposure of the pulp exostosis, hypertrophy of the cementum, nodular developments of dentine in the pulp cavity, periostitis, plastic or suppurative, impaction of permanent teeth in the maxillary bone, crowding of teeth for want of room.

Each and all of the above mentioned pathological conditions of the teeth may and have caused mani-

festations of reflex nervous irritation, though they may exist in a severe form without producing any such result.

Of the nervous and complicated morbid conditions produced from dental diseases, the following may be mentioned as occurring less frequently than those above mentioned: Chronic trismus, epilepsy, tetanus, partial paralysis, amaurosis, deafness, opthalmia, and perverted nutrition.

It is not deemed necessary to occupy your time in the narration of cases illustrating the foregoing observations, but I will refer you to the works of Salter, Bond, Garrison, and our periodical literature, where they may be found and read at your leisure.

From the foregoing observations, it is surely very important that the physician should never disregard the dental organs as agencies in the production or continuance of diseases; and it should also deeply impress the dental practitioner with the importance of a clear and comprehensive knowledge of the entire organism, both in health and in a diseased condition. He should ever bear in mind that his operations are not upon isolated organs merely, but upon organs bearing very intimate and close sympathetic relations to the entire economy.

PISTOL-SHOT WOUND OF THE ABDOMEN; LAPAROTOMY AND SUTURE OF THE WOUNDED INTESTINES.

Read before the Medical Society of Virginia, October 22, 1887,

BY A. S. PRIDDY, M.D.,
OF KEYSVILLE, VA.

Ras Wimbish, a negro, aged 60 years, was twice shot by his employer, with whom he was engaged in an altercation, on September 4, 1887, about 8 P.M., with a Smith & Wesson revolver, 32 calibre, at a distance of six or eight feet. The shooting occurred on a farm in Mecklenburg county, about four miles from the town of Chase City. The wounded man, at the last discharge of the pistol, exclaimed that he was shot, ran to the stables, mounted a horse, and rode into town where his family lived, "to get a doctor to cut the balls out." Dr. C. W. Walker was called in, and found him falling into a state of profound shock, from which it was several hours before he began to rally. He was, after recovering from the shock, very restless, with an anxious countenance, much thirst, pulse quick and weak, and hiccoughed slightly, though vomited none. Dr. Walker administered ⅓ grain of morphia, and proceeded to examine him.

He found that the first shot had entered the fleshy portion of the thigh, and passing through was lodged under the skin on posterior aspect, from which it was easily extracted. The second shot had taken effect about one-half inch below the anterior superior spine of the ilium, toward the abdomen, the point of entry being small, presenting a jagged appearance, and was sealed with a clot of blood. Abdominal palpation revealed nothing wrong, except considerable pain on pressure.

He complained of an excruciating pain in abdomen. The track of the ball was not fully explored with a metallic probe, as it was quite certain, from its direction, that it had entered the abdominal cavity. The man was put to bed and the usual "ostrich plan" of treatment pursued; that is, warm applications to the bowels, and sufficient opium to control pain, to await developments in the case.

On the next morning the patient was found to have passed a fairly comfortable night, under opium. He had voided a large quantity of clear urine, but his bowels had not moved since the shooting. The abdominal pain and tenderness had increased. The abdomen had become very tympanitic and emphysematous, which symptoms were attributed to a gaseous distension of the abdominal walls, or of the intestines. This condition was of such importance as to make death seem imminent from dyspnœa.

Thus things continued: dyspnœa, hiccough, occasional retching and vomiting, slightly elevated temperature, and an obstinate constipation, till the third day after the shooting, when a cathartic was given which in due time produced several evacuations, containing considerable blood. This made intestinal perforation certain beyond cavil. After this the tympanitic condition of the abdomen disappeared considerably for nearly twenty-four hours, after which the before-mentioned condition again became just as alarming, and so continued.

On September 8th, the fourth day after the shooting, Dr. F. J. Gregory, of this place, and I were telegraphed for. We arrived about 9 o'clock that night, and found the man in the condition before mentioned; and according to Dr. Walker he was growing weaker. There were also slight peritonitic symptoms. We advised an exploratory incision, with several objects in view: first, to relieve the gaseous distension, which was fast causing his death from dyspnœa; to cleanse the cavity of all extravasations and to repair damage to the wounded viscera; and give free drainage, which might lessen his chances of death from suppurative peritonitis, septicæmia, etc., or at least make his time of living more comfortable, and his death one not attended with so much suffering. These views were concurred in by Dr. Walker, though we thought that the "golden opportunity" had been lost by waiting so long. Yet, at earnest solicitation of the wounded man to give him every known chance for his life, however slight that chance might be, we decided on a laparotomy the next morning, provided the man were living.

The operation was performed on September 9th, the patient being still alive. I made preparations for the operation, which were about as complete as could be made in a *negro cabin*, but not so elegant as some of our well equipped city hospitals afford. The instruments were placed in a 5 per cent. solution of carbolic acid, and the sponges thoroughly washed out in that solution. The hands and nails of all the participants in the operation were cleansed with soap and water, and then dipped in carbolized oil. The toilet of the abdomen was made by scouring the walls, shaving the pubes, and washing the whole over with a 5 per cent. solution of carbolic

acid, especial attention being paid to the navel and point of entry of the ball.

The sponges were next placed in bichloride solution in water 1–1500. Plenty of towels were also provided in same warm solution.

At 10 o'clock, in the presence of and assisted by Drs. Gregory, Walker, H. H. Jones, W. B. Jones, and Mr. Ogburn, after the hypodermic administration of ⅓ gr. of morphia and 1-100 gr. atropia, chloroform was administered and the operation begun. An incision was made in the median line from the umbilicus to the symphisis pubis, down to the peritoneum, which was incised after the capillary bleeding had been stopped by pressure with sponges wrung out of hot bichloride solution. On opening the peritoneum a considerable quantity of bloody serum, pus, etc., escaped from the cavity, all of which had a distinct and disagreeable fœcal odor; yet there was only a trace of fœcal matter in the cavity. I then introduced my hand into the cavity and slowly drew out the intestines, examining each coil carefully till I came to the jejunum, on whose mesentery I noticed a contusion about the size of a silver dime, which was evidently the point at which the force of the ball had spent itself. When the descending colon was reached it was found to be lacerated longitudinally for more than six inches, extending into the sigmoid flexure. I passed my whole hand through the wound in this intestine, into the rectum. The meso-colon was also found perforated. The intestines were wrapped in towels wrung out of the hot bichloride solution, during the operation, and the normal temperature preserved so far as possible.

The lacerated gut was united by a continuous suture of catgut, which was improvised by soaking a fiddle string in water the night before, and then soaking a while in carbolized oil. The abdominal cavity was washed out with the bichloride in water 1–1500, and then thoroughly sponged out.

The wounds, both in the gut and mesentery, were packed with iodoform. I did not think it necessary to excise the wounded mesentery. The intestines, after having been thoroughly cleansed, were returned to the cavity. A Nèlaton's soft rubber catheter, No. 12, was "nicked" in several places, and introduced into cavity as a drainage tube. The abdominal incision was closed with seven sutures of white silk, which included the peritoneum. Adhesive strips were then applied to the abdomen. The wound was dressed with iodoform, and a large cotton pad covered the whole abdomen.

The operation lasted about fifty-five minutes, which was a rather shorter time than I intended to take, but the man came near dying under the operation, and was only stimulated by several hypodermic injections of arom. spts. ammonia and brandy, and, with a little speed in the operation on my part, came out very well. He was immediately put to bed, and hot rocks applied to his extremities and epigastrium. Whiskey or brandy were given freely, and in due time reaction came on freely. He was ordered milk and raw eggs for food, and this food *alone*, with stimulants of whiskey or brandy when needed. Morphia in ¼ gr. doses was ordered every three or four hours, to control pain and lock up his bowels.

At 3 o'clock P.M. that day his temperature was 100°, pulse 110, respiration normal and easy; slight hiccough; no tympanites; lays with legs extended, suffered little pain.

Sept. 10, 8 A.M.—Seen by Dr. Walker. Temperature 100°, pulse 135. Tongue coated, anxious countenance, no peritonitic symptoms. Spent a moderately comfortable night under morphia. Think he may live through to-day. Dr. Walker was summoned before the court to testify in the case and did not see him again until 6 P.M., when he found him almost completely exhausted, pulse about 180, no volume, and scarcely perceptible. Skin bathed in a cold, clammy sweat, extremities very cold. Did not think it possible for him to live through the night. Ordered milk and whiskey every few minutes through the night, and hot rocks to his feet.

Sept. 11, 8 A.M.—Seen by Dr. W., who found a marked improvement in his condition; had spent a very comfortable night when not taking the nourishment. Temperature normal, pulse 135. respiration free and easy, extremities warm. No peritonitis. Could turn over in bed. Took nourishment of milk and whiskey regularly and with apparent relish. Some little colicky pains in abdomen relieved by morphia. He continued to do well throughout the day, and took a supper of rice, contrary to our directions.

Sept. 12, 8 A.M.—Rested well last night under morphia. Temperature normal, pulse 120, with good volume. Tongue clean, no peritonitis, suffering no pain; the abdominal wound suppurating quite freely, drainage-tube doing good work.

6 P.M.—Dr. Walker found him doing well. No change in condition except that he had a large solid evacuation of the bowels, which caused very little pain or tenesmus; contained no blood nor mucus.

Sept. 13, 8 A.M.—Seen by me for the first time since the operation. Found him comparatively comfortable, temperature normal, pulse 100, full and strong. Could turn over in bed or lie on either side. Kept flies off himself. I removed the dressings from the abdomen and found that the abdominal wound had united entirely down to fourth suture. Washed the abdomen off with carbolized water and applied clean cotton, after dressing the wound with iodoform. He did well the whole day.

Sept. 14, 8 A.M.—Seen by Dr. Walker. Rested well the night before with ¼ gr. morphia. Had taken sufficient food of milk and eggs. Temperature normal, pulse 100, good volume; had a solid evacuation, which griped him considerably.

Sept. 15, 8 A.M.—Did not take any morphia last night, and spent quite a restless night. Some little tenderness over bowels, but doing well in other respects. Left a dose of morphia for him to take at night.

Sept. 16, 8 A.M.—Seen by Dr. Walker. Rested well last night. Comfortable, pulse 100, temperature normal, tongue glazed and red, extremities a little cold. Noticed a continuous discharge, of a muco-purulent nature, from the anus.

Sept. 17, 8 A.M.—Seen by Dr. Walker and me. Found him beginning to show some signs of exhaustion. Pulse 110 and feeble, temperature subnormal, extremities rather cold; all of which symptoms were due to the poor attention to his food and other nursing, which his ignorant and indifferent family gave. Dr. W. B. Jones consented to nurse and feed him properly, which he did, and marked improvement at once followed.

Sept. 19, 8 A.M.—Doing well. Wound entirely united. Removed drainage-tube and took out all of the sutures and applied adhesive strips. Takes food of milk, eggs, peptonized beef, soups, etc.

Sept. 20.—Doing well, and from this time the improvement was steady and uneventful, he being able to take solid food. Sleeps well and has sat up on one or two occasions. The point of entry of bullet commenced suppurating about October 1, and was very superficial, being due to some little foreign substance being carried in, and was relieved by syringing the hole out with a 3 per cent. solution of carbolic acid in water.

I saw him on October 12, which was a few days prior to the writing of this report, and found him, to all outward appearances, entirely well of the wound and the operation, but feeble, and suffering at the time from an attack of diarrhœa which, I think, was in no way dependent on the wound, but rather to be attributed to some improper article of food given him, and to bad nursing in general. His age, 60 years, the poor attention paid him by his family, who are entirely indifferent as to his ultimate recovery, and the confinement in the house and bed, tend to make his recovery of former strength and activity necessarily slow. But as I have said before, at this time, nearly six weeks after the shooting, he is practically well of the injury.

Remarks.—Although the profession is much interested in this branch of surgery, yet the literature on it is of necessity very meagre, for it was only in 1881, that Dr. R. A. Kinloch, of Charleston, S. C., first performed laparotomy for gunshot wounds of the abdomen; and only in 1883, that Kocher, of Berne, and 1884 that Dr. W. T. Bull, of New York, performed the first two successful cases on record. I have not mentioned the case reported and recorded in the "Medical and Surgical History of the War of the Rebellion," which Dr. Kinloch performed in 1863 on a confederate soldier for a gunshot wound sustained seven months previous to the operation, and which was entirely successful, the man living several years after the war; but I think this operation was more for disease than for traumatism, and should so be regarded.

Of all the cases of laparotomy reported—and I think there are only fifty-seven—I think my case presents some points of interest which are not seen in the others. There may have been more viscera injured in some other reported cases, and I think Dr. Keen, of Philadelphia, reported last April a case in Vineland, N. J., in which the stomach, colon, ileum and kidney were wounded, from which the patient died on the fifteenth day. There are also several other cases in which the stomach was perforated, and another in which the liver was wounded.

But my case presented a larger wound in the intestine, and was operated on after the fifth day of the injury, and the patient was just being attacked with peritonitis; and of which tended to make the man's chances of recovery infinitesimally small.

One remarkable feature in the case is, I think, the very small quantity of fœcal matter found in the cavity; which can be explained by saying that the man ate an early dinner, and had eaten no supper, so nearly eight hours had elapsed since the last food was taken, and consequently the contents of the bowels had sought the lowest portion of the tract, and had passed to a part below the site of injury. The bowels were evacuated in the early part of that day.

My case and the case of Dr. Kollock, of Cheraw, S. C., are the only two cases that have been operated on in negro cabins, where the surgeon labors under a great many disadvantages. The negroes are, as we all know, very ignorant and careless, and good after-treatment is from them an impossibility. And in the country it is very inconvenient and sometimes impossible for the surgeon to see his patients so often as necessary.

I have reported this case merely to show under what unfavorable circumstances this operation may be undertaken, and to what a satisfactory termination it may be brought; for were the man to die now the operation has certainly saved him six or seven weeks of life, when, on the contrary, it would have been impossible for him to have lived but a few hours without the operation, for fœcal extravasation would have been almost sure to have followed, and as I have said before, peritonitis had begun to set in. Even if the wounds be of such gravity as to make recovery impossible, as Dr. Kinloch well says, "next to the cure of disease we look to the satisfaction coming of a painless death" by this operation. The patient will certainly die an almost painless death, which will well repay any one for the trouble and risk in undertaking the operation.

I hope that this case, with other reported cases, may encourage any and every physician, whether living in the city or country, to lay aside the old *passive* line of treatment, and offer to a man with any abdominal traumatism *whatever*, the chances for his life offered in this day of antiseptic surgery; and not until he has done this will he be free from all responsibility.

A CASE OF EXTIRPATION OF THE KIDNEY, WITH REMARKS.[1]

BY L. H. DUNNING, M.D.,
OF SOUTH BEND, IND.

The patient, Mrs. H., aged 46, underwent the operation of nephrorraphy Oct. 30, 1884. The history of this case was published in Feb., 1885.[2] The kidney was fixed at the time of the operation by eight sutures, three of which passed through and included the renal

[1] Read by Title before the Indiana State Medical Society.
[2] THE JOURNAL, Feb. 21, 1885.

capsule. These latter untied and loosened within the first 24 hours after the operation, and on this account I think the kidney was not firmly anchored. However, three months after date of the operation the kidney was movable only to the extent of one inch in a transverse direction.

The symptoms for the relief of which nephrorraphy was done, pain and vomiting, were for a time relieved, but after a few months gradually returned, and at the end of one year were more severe than they were before any operative procedure was resorted to. During the last year they have progressively increased until they had become so grave as to threaten the life of the patient. The pain is located upon the right side in the hypochondrium and right lumbar region and sometimes extends downwards into the right groin and hip. The pain is for the most part of a dragging, pulling character, though sharp lancinating pains sometimes shoot through the right side. Vomiting occurs three or four times after each meal. For the relief of the vomiting every known means at our command has been used including diet, medicine and lavage, all to no avail.

The patient has become much emaciated though not bed-ridden. The abdominal walls are so much relaxed that the outlines of the lower border of the liver can be easily felt, and the left kidney, though entirely fixed and normal, can be unmistakably and distinctly palpated. To this fact numerous physicians of our city will bear testimony as they were invited to examine the patient on account of this rare condition.

Frequent examination of the urine had revealed nothing abnormal except that at times it would be scanty and of high specific gravity, and at other times very abundant and of low specific gravity.

On Feb. 22, 1887, assisted by Drs. Hitchcock and Burchard, the kidney was extirpated by the writer. Two incisions were employed, one transverse commencing two inches to right of spinal column, and extending four inches in a direction nearly parallel to the twelfth rib, and about one-half an inch below it; the other a vertical one beginning at the starting point of the first one and extending downward to the crest of the ileum.

By means of these incisions the kidney was easily reached though we experienced some difficulty in keeping the colon out of the way. The peri-renal adipose tissue was torn through, and the kidney invested by its capsule brought into the incision. It was carefully examined for calculus both by touch and with the needle, but none was found. The pedicle was tied first with a double ligature, *i. e.*, one around the ureter and another around the vessels; then a stout ligature including both. The pedicle was then cut off next to the kidney and dropped.

There being no hæmorrhage the wound was quickly closed by sutures. A drainage tube was left in the wound, and an antiseptic dressing applied. The patient rallied well, and went on to a speedy recovery. For the first few days she was nourished almost entirely by enemas. After a few days lime water and milk were given in small quantities and retained. After a time beef extract was given, then boiled rice. The remaining kidney took the double work thrown upon it and performed it without apparent disturbance. The wound healed speedily with little suppuration. All circumstances combined to make the patient's recovery both safe and comfortable, so that at the end of four weeks she was able to leave her bed a part of the time.

The kidney which was removed was carefully examined by Dr. Hitchcock, who reported to the writer that the kidney was normal in every respect except that upon the posterior surface near the external border there was found cicatricial tissue limited to an area one inch long, a quarter of an inch wide and a quarter of an inch deep. The weight of the kidney was five ounces. The accompanying table is an accurate record of the case for thirty days after the operation. It may be found to contain some points of interest, particularly the action of the left kidney.

Record of Pulse, Temperature, etc., in a case of Nephrectomy for 30 days after the Operation. Patient aged 46 years. Operation Feb. 22, 1887, 8:30 a.m.

22, 12 M. Temperature 97.5. Pulse 62. Patient rallied somewhat, very drowsy, surface warm, considerable nausea, urinated at 8 A M., before operation. 4 P.M. Temp. 99.5. Pulse 78. Catherterized and drew 10 oz. clear, light straw-colored urine, complains of pain, gave tr. digitalis gtt. j, hyoscyamus fld. ext. gtts. ij every 2 hours. 8.30 P.M. Temp. 99. Pulse 90. Catheter, urine 6 oz., vomited, considerable pain in hypochondrium. Prescribed chloral per rectum and bismuth sub. nit. per orem.

23, 7.30 A.M. Temp. 97.5. Pulse 84. Comfortable night, catheter, 12 oz. healthy looking urine, vomits considerable. Continued bismuth and chloral and prescribed ox. cerium in gr. x doses every 2 hours. 1 P.M. Temp. 98.5. Pulse 72. 6 oz. urine, vomited once. Rectal alimentation every 4 hours. 8.30 P.M. Temp. 98.4. Pulse 78. Catheter, urine 5 oz., sp. gr. 1020, normal color, looks well, drinks little water. Continued enemas, ordered 2 or 3 teaspoonfuls milk and lime water, continued ox. cerium.

24, 7.30 A.M. Temp. 99. Pulse 79. Urine 17 oz., sp. gr. 1019, normal color, has taken 3 teaspoonfuls lime water and milk every 2 hours and no vomiting, everything favorable. 1.30 P.M. Temp. 98.5. Pulse 69. Catheter, 13 oz. urine, no vomiting. Enema of one quart water which caused light liquid movement, patient feels well. Continued treatment. 8.30 P.M. Temperature 98.8. Pulse 74. 17 oz. urine, normal, no vomiting.

25, 7.30 A.M. Temp. 98.5. Pulse 74. Rested well, 14 oz. urine. Dressed wound, dressing soiled with bloody serum but not offensive, left in tube. 1.30 P.M. Temp. 99.6. Pulse 84. 12 oz. urine passed voluntarily, some headache, she now takes 4 tablespoonfuls of milk every 2 hours without vomiting. 8 P.M. Temp. 98.5. Pulse 80. 10 oz. urine, normal, nourishment same. Ordered cathartic.

26, 7 A.M. Temp. 98.5. Pulse 76. 14 oz. urine. More cathartic given. 4.45. P.M. Temp 99.2. Pulse 80. 12 oz. urine, sp. gr. 1018, acid, no albumin nor pus, bowels moved well, no vomiting.

27, 8.30 A.M. Temp. 98. Pulse 72. 12 oz. urine, bowels acted several times, wound dressed, little pus, ½ drachm, removed tube, wound apparently healed except tube track, no vomiting. Ordered ℥ iij of milk every 3 hours. 5 P.M. Temp. 99.8. Pulse 96. 12 oz. urine, slight nausea, no vomiting.

28. 7.30 A.M. Temp. 98.8. Pulse 84. Urine 14 oz., sp. gr. 1020, acid, normal color, bowels acted last night. 4.30 P.M. Temp. 99.5. Pulse 88. Urine 8 oz., 5 ozs. milk now swallowed and relished. Continued enemas.

March 1, 7.30 A.M. Temp. 98.5. Pulse 84. 14 oz. urine, sp. gr. 1026, more nourishment, no vomiting. Removed stitches, wound healed by first intention over four-fifths extent.

3. Temperature 99. Pulse 84. Patient is taking more nourishment without vomiting and with relish, urine voided in last 24 hours 28 oz., of sp. gr. 1027, normal in color and odor.

5. 8 A.M. Temp. 98.2. Pulse 72. 18 oz. urine during last 24 hours, it is turbid, sp. gr. 1029, nourishment retained, bowels

constipated. Ordered cathartic. 6 P.M. Temp. 99. Pulse 84. Cathartic acted, producing 4 copious discharges attended with much pain. Gave chlor. anodyne to relieve pain and it set up vomiting.

7. Temp. 98.5. Pulse 74. Patient better, vomiting ceased, 32 oz. urine, sp. gr. 1022, wound healed.

8. 7.30. Temp. 98.5. Pulse 78. 32 oz. urine in last 24 hours, bowels moved by enema, nourishment retained, patient looks well.

9. Temperature 98.5. Pulse 72. Had headache during night, better to-day, 24 oz. urine, no appetite.

11. Temp. 98.5. Pulse 78. Bowels moved by enema, sat up in bed last night. Urine 24 oz.

15. Temp. 98.5. Pulse 72. Urine abundant, ate egg, toast and milk for dinner and did not vomit, sat up in bed.

21. Temp. 98.6. Pulse 72. Sits up once a day, walks a little, complains of pain in right hypochondrium, hip and leg, inclined to vomit if she lies upon her right side soon after taking nourishment but at no other time, eats well and retains food.

Nearly three months have passed since the operation, and it may be of interest to note the condition of the patient at the present time. She is up and around the house doing a little light work. She takes liberal quantities of milk, eggs and old bread, and seldom vomits if she restricts herself to those articles. She has gained several pounds in weight during the last six weeks. The remaining kidney does the work of both with apparent ease. She complains of considerable pain in the loin, through the scar, and there is some tenderness in the right hypochondrium. Except the pain, for which I am at loss to account, her condition is greatly improved and we may truly say that the nephrectomy was to her a decided benefit.

One case, be it ever so successful, cannot furnish a rule for action; it can only be suggestive. This one is reported in order to add one to the number still too small to definitely settle all important questions growing out of the operation. To the writer this has been an exceedingly instructive case, and in meditating upon it he has concluded that its history tends to throw some light upon a few dark points needing illumination.

1. A healthy kidney, if movable, may induce an excessive and persistent vomiting which can only be relieved by removing the offending organ. Here a carefully regulated diet, medicine, lavage, pads, friction and counter-irritants were all used with no avail. Nephrectomy stopped the vomiting.

2. Nephrorraphy may place the patient in a worse condition than she was before the operation. Mrs. H. suffered more pain and vomited more after the operation for anchoring the kidney than she did before it was done. The reason of this the writer thinks can be easily explained. When the kidney was exposed for its removal it was found surrounded by an envelope that had the appearance of the normal peri-renal adipose tissue, with bands running through it in all directions of a pinkish white, glistening tissue, reminding one of scar or fibrous tissue. These bands were undoubted cicatricial tissue or bands of adhesion resulting from the operation of nephrorraphy. These bands reached out in all directions from the kidney to the surrounding structures and formed attachments to them. This was very apparent in respect to the liver, the colon and the structures posterior to the kidney and it was thought with the duodenum, though not seen. Here the writer believes is an explanation of the great amount of pain present notwithstanding the movements of the kidney were much less than they were before it was fixed.

Every movement of the kidney beyond certain circumscribed limits caused tension of the bands of adhesion, and if carried far enough pulled upon the colon and under surface of the liver and probably the duodenum.

3. In cases similar to the one the writer is here describing it is his belief that some treatment of the peri-renal adipose tissue different than that usually employed should be adopted. In a preceding paragraph the extensive attachments of this structure and the visible evidence of former inflammation in the structure itself were both stated. In the removal of the kidney it is necessary to tear through this tissue and if it be attached by inflammatory adhesions to the capsule proper of the kidney, which it frequently is, extensive injury to the structure must occur which must result in further inflammatory adhesions.

Let us bear in mind another fact after the removal of the kidney: the cavity thereby left in the investments will be wholly or partly obliterated by the collapsing of its walls, and these walls are made up of the structures under discussion so that there would be bands of adhesion extending in various directions from a central mass. In consequence of this the movement of one organ may be felt by a distant organ, or in consequence of the contraction of the cicatricial tissue the liver, transverse colon and duodenum on the right may be brought too closely together or their movements be too much restricted to be compatible with perfect health or freedom from pain. The remedy for this possible result may, the writer thinks, be found in the removal of the whole or part of the peri-renal adipose tissue. In the case of Mrs. H. this could easily have been done, but that there could possibly be any advantage in this did not occur to the writer. Should another opportunity present itself it will be resorted to and the result duly reported.

4. In this case the deep sutures used in nephrorraphy undoubtedly passed through the cortical portion of kidney to the depth of ⅛ or ¼ inch and no extensive disease of the organ resulted. A small part of the organ was however entirely destroyed, being displaced by cicatricial tissue. This result tends to verify the statements made by the writer in a previous article[3] That it is exceedingly difficult in the operation of nephrorraphy to pass the sutures beneath the renal capsule without injuring the cortical portion of the kidney since in this instance great care was used not to injure that structure. It tends too to justify the procedure of Morris, who recently reported a case of nephrorraphy in which he passed a deep suture through the capsule and cortical portion of the posterior and upper surface of the kidney, and although albumin appeared for a few days in the urine a permanent fixation and complete recovery resulted.

[3] The Journal, Feb. 21, 1885.

A NEW FORM OF SUTURE PIN FOR USE IN PERINEORRHAPHY.

BY J. H. KELLOGG, M.D.,
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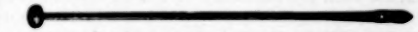
After employing the old method of operation for the repair of laceration of the perineum in something more than fifty cases, I became satisfied that some method might be devised whereby the patient would be subjected to less suffering, and the surgeon less uneasiness respecting the results. The chief cause of pain always seemed to be a swelling of the tissues from the strangulation induced by the wire sutures, which was frequently increased by more or less cutting of the skin in spite of the nicest care in the adjustment of the sutures and avoidance of unnecessary strain. I noted that some of our best operators, in their writings upon the subject, referred to this swelling as a necessary result of the operation, and regarded opiates in some form as on this account necessary in the management of cases of this sort. This led me to believe the swelling to be due to the plan of operation, and not to any individual fault of my own. I found the opium very objectionable, both from its unpleasant after effects, and from its apparent immediate effects in delaying the reparative effort. Fearing to make a very radical innovation, and with much timidity, I gradually lessened the number of wire sutures employed, using superficial silk or catgut sutures, until I reduced the wire sutures to one; and this I did not bury in the tissues, but carried through the mucous membrane, exposing it for at least an inch upon the vaginal surface, about one and one-half inches from the introitus vaginæ. By thus giving a broad bearing surface, I was pleased to find much less swelling of the parts; and corresponding comfort to the patient, and more speedy union of the tissues. Subsequently, I dispensed with the wire suture altogether, except in a case of complete laceration in which from previous unsuccessful operations or from the great length of time which had elapsed since the laceration occurred, there was great scarcity of tissue and difficulty in holding the parts in good coaptation.

I had followed this method with most satisfactory results in more than 100 cases, when my attention was called to the form of pin devised by Dr. H. O. Marcy. The great advantage secured by the ingenious device of Dr. Marcy in securing lateral pressure upon the wound, and wholly preventing the strangulation of the tissues often unavoidable by the old method, was to me at once apparent. I had found my own method so satisfactory, in these regards, however, that I continued to employ it until a few weeks ago, when it occurred to me that I would try the pin. Being obliged to operate before I could provide myself with one of Dr. Marcy's pins, I had a set of pins made for me by a jeweler, using platinum wire; it occurred to me to have them made after what I suppose to be a new fashion, viz., in the form of a hare-lip pin with an eye near the point, by means of which the inner extremities of the needle may be secured together by silk or silver wire, and held as closely together as may be required. I found that the pins answered the purpose admirably. By securing the inner ends of the pins in close proximity, any desired degree of pressure may be made upon the sides of the wound by simply bringing together the outer ends of the pins and securing them by means of silver wire wound first around each pin and then twisted together. The advantage which these pins possess in common with other forms of pins used for the same purpose are chiefly these:

1. They secure lateral pressure of the wound, thus spreading out the tissues instead of drawing them together, and by this means securing union in such a manner as to produce a thicker and more nearly normal perineum than is ordinarily obtainable by the old method.

2. They effectually prevent the swelling of the tissues so constantly present in cases treated by the old method, and thus contribute to the comfort of the patient and diminish the liability to destructive inflammation, and septic poisoning.

3. They are not likely to cut or otherwise injure the tissues.



I have not used any other form of pin, and hence, cannot speak except from theoretical considerations; but it has seemed to me that the form of pin here presented has at least the following advantages over other forms:

1. The readiness with which it may be introduced and secured in position.

2. The perfect adjustment of pressure which may be secured. Even very severe hæmorrhage may be controlled, as the pressure may be made as great as desired for a few hours subsequent to the operation, being lessened with the greatest facility at any subsequent time as may be considered desirable, by simply separating the outer ends of the pins. I have had occasion to perform perineorrhaphy only six times since devising these pins, and hence, my experience with them is as yet very limited; but the results have been so excellent that I hope they may prove to be a serviceable addition to the surgery of the female perineum. I may further remark that in the use of the pins I do not rely wholly upon them for holding the wound in coaptation, but carefully join the edges of the mucous membrane and skin by fine silk or catgut sutures, taking pains to cover completely the denuded surface. I depend upon the pins to control bleeding and hold the centre of the wound firmly together. The pins give little or no pain, and may be removed on the fifth day. I have found platinum to be too soft and flexible, and now use steel or brass pins, nickel-plated. I fancied that some inconvenience might be experienced by the patient from the points of the pins exposed in the vagina, but have found no complaint of pain from this cause. If the direction of these pins is correct, they will lie almost parallel with the axis of the vagina, and with the portion exposed in the vagina resting flat upon the posterior vaginal wall.

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS. — The fourth division made by VOLKMANN (see the preceding numbers of THE JOURNAL) is *Tuberculosis of Bones, Joints, and Tendon-sheaths.*

17. Everything that has hitherto been called caries of bones, Pädarthrocace, spina ventosa, scrofulous inflammation of joints and bones, tumor albus, fungus articuli, strumous affection of joints (English), in most recent time designated, on Billroth's precedent as fungous inflammation of bones and joints, belongs, with very few exceptions, to genuine tuberculosis.

18. As an etiological moment in the origin of chronic suppurative affections of bone and joints, a series of other infectious diseases has to be considered; most of them, however, begin acute, to become chronic only in their farther course. The most frequent of these, *infectious osteo myelitis*, often, as we know, leading to suppuration of the joint and destruction of the articular cartilages, presents such a characteristic clinical picture, even when not acute from the beginning nor accompanied by violent symptoms, that diagnostic difficulties can only arise in the more rare form of osteo-myelitis epiphysaria, or when the process is localized in the short bones.

Cases of joint and bone suppuration in syphilis, rheumatic fever and all kinds of septic infection, are also easily distinguished from the tuberculous forms.

In the so-called *metastatic inflammations* of joints after acute exanthemata are mainly the cause of difficulty in deciding their character, so soon as they have gone so far as to cause suppuration and destruction of the joint. Some of these cases simply mean septic or pyæmic processes; others are undoubtedly tuberculoses, which develop while the acute exanthem still exists, or they closely follow it, and often begin very acute. The question is, therefore, how far in acute exanthemata do suppurative and destructive inflammations of the joints ex ist, really caused by the specific (exanthematic) poison?

19. *Tuberculous affections of joints* start primarily either from the bones or from the synovial membrane,

The primary osseous form is most frequent, particularly in children. It begins in the bony epiphyses by the formation of circumscribed tuberculous foci, which remain small, as a rule, and do not exceed the size of a pea or that of a hazelnut. Diffuse cheesy infiltrations of a larger area of the spongiosa are much more rare. In the beginning, therefore, the trouble is not a joint affection at all, but one of the bone, and may remain as such when the tuberculous foci do not soften or suppurate, or when the foci perforate extra-articular instead of into the joint. At any rate, the purely osteopathic stage may drag along for an uncertain length of time before the specific affection, the infection of the joint, follows: This first occurs when the products of the cheesy degeneration and the tuberculous suppuration of the bone reach into the joint.

Tuberculous foci in the spongiosa, particularly in children, have a great tendency to mortify *in toto*, and become separated as characteristic, cheesy, concrement-like sequestra. The process of demarcation that then takes place has evidently a very good effect, forming as it does a barrier of granulations, the innermost layers of which are found regularly studded with masses of miliary tubercles, which, however, at the same time protect the neighboring bone from further infection. Cheesy sequestra and masses of pus found in tuberculous bone cavities only seldom give rise to new (secondary) tuberculous eruptions and infiltrations in the neighboring spongiosa. Not infrequently several of these tuberculous osseous foci are present (generally not more than 2 or 3), sometimes in the same epiphysis, sometimes in both articular extremities at the same time. They have certain places of predilection, as the olecranon, the iliac portion of the acetabulum, etc., though the relative frequency is not yet decided by exact statistical researches.

20. *The primary synovial form of tubercular joint affections* is particularly to be found in adults, and more especially in old people: this form prefers certain joints, as the knee for example.

The miliary tubercles, which infiltrate the synovialis densely, are developed either with or without simultaneous growth of vessels and granulations. In the first case the common fungous form is present, in the second sluggish suppuration of the joint, designated by the older authors as cold abscess of the joints, etc., much more frequently seen in older people, and offers an especially unfavorable prognosis.

21. Sometimes larger, isolated knots of tubercles develop in the synovialis, reaching to the size of an almond or even to that of a pigeon's egg, and becoming pediculated may project into the joint. The remainder of the synovialis may be free from tubercles from the beginning, but will generally later on become infiltrated with miliary eruptions. Even in the last mentioned cases healing is possible after extipation of the knots and short drainage of the joint.

22. An important question is, How far may inflammations (originally not tuberculous) of joints become tuberculous in their further course? At the present time this is known only in the somewhat rare cases of fibrinous synovitis with the formation of rice-like bodies (corpuscula oryzoidea), and in cases of chronic hydropsies with hyperplastic growth of fatty masses. (With regard to tuberculous affections of joints after distorsion, especially of the hand and foot, see below.)

23. Tuberculous inflammations of joints, whether primarily originating from the synovialis or from the bone, do not necessarily, even in their gravest forms, lead to extensive defects of the bone (caries sicca) followed by suppuration in the joint and abscesses. But sometimes the enormous eruption of tubercles in the tissue of the synovialis causes a copious watery exudation—hydrops tuberculosus.—*Langenbeck's Archiv*, Bd. 33, Hft. 1.

FRACTURE OF THE SKULL BY CONTRE COUP.—By

PAUL BERGER (Paris) and MLLE. A. KLUMKE (Paris). This paper contains a minute discussion of a case from which the following conclusions are deduced: 1. Independent fractures of the base of the skull, produced at a distance from the point of application of external violence on the skull exist. 2. These fractures occupy by preference the orbital prominences, the lesser wings of the sphenoid, and the cribriform plate; they may also involve the petrous portion of the temporal bone. 3. They appear to result from the mechanism assigned by Perrin to fractures of the skull by *contre coup*. 4. Intracranial effusions of blood situated between the dura mater and the skull, determined by the rupture of the middle meningeal artery at the level of a fracture, may occupy the lower region of the middle fossa of the skull and be accompanied by no sign of cerebral compression, even when they attain a considerable volume. 5. Consecutive to a traumatism, a hæmorrhagic focus may be observed in the cerebral substance, produced by *contre coup* at a point opposite to that where the violence was applied, without its being possible to invoke the displacement of the cerebro spinal fluid as the cause of its production. 6. In recent and considerable traumatisms, there may exist a clearly defined aphasia, without there being any appreciable lesion of the convolution of Broca, of the foot of this convolution, or of the convolutions of the island of Reil. 7. It is impossible then in case of recent traumatism affecting the skull, to depend either exclusively or even principally upon this symptom, to affirm the desirability of trephining or to determine the point for the application of the instrument.—*Revue de chirurgie*, February, 1887.—*Annals of Surgery*, August, 1887.

BULLET WOUND OF THE LIVER.—At the meeting of the Clinical Society of London, on October 14, DR. LEDIARD (Carlisle) contributed this case, which was one in which a constable was shot through the body, at a short distance, whilst pursuing some burglars. The bullet entered the right side of the chest, between the seventh and eighth ribs, a little to the outer side of the mammary line. Deep collapse resulted, during which the bullet was extracted from the right loin, just over the last rib, and two inches from the spine. It was believed that the constable was leaning forward to catch a man in front of him when he received his wound. Jaundice supervened, and on the ninth day the extraction-wound in the back discharged a large amount of bile-stained fluid, and continued to do so to a less extent for some weeks. Evidence of air in the right pleural cavity to a limited area was also present, and subsequently an empyema formed and discharged freely a large amount of pus through the bronchi. Elevation of temperature lasted more or less for fifty-eight days, but at the end of three months the patient was convalescent, and had made a complete recovery, being still in the Cumberland police. The course of the bullet was, probably, through the convex surface of the liver, the diaphragm being perforated twice, and the lung grazed. The presence of bile was ascertained by chemical tests, corroborated by Dr. Walker, of Newcastle, public analyst for Carlisle. The microscope also gave clear evidence of a wound of the liver-tissue. The bullet was a large one, and weighed 3½ drachms.—*British Medical Journal*, Oct. 22, 1887.

THE URINE IN TABES DORSALIS.—The following facts are set forth by MM. LIVON and ALEZAIS as the result of a series of researches on the urine of patients affected with an apyrexial disease of the cord—namely, tabes dorsalis: A tendency to diminution of the urea eliminated in the twenty-four hours; a diminution in the total daily discharge of phosphoric acid, with a tendency to proportional augmentation of the discharge of earthy phosphates; a great variation in the elimination of chlorine, with a bias in favor of hyperchloruria. Intravenous injections of tabetic urines appear to be sufficiently toxic in their action, since it has been found that from twelve to twenty-four cubic centimetres of urine per kilogramme of body weight of animals was sufficient to kill dogs.—*Lancet*, Oct. 15, 1887.

HÆMOSTATIC MIXTURE.—PARVESI recommends the following as a hæmostatic mixture in gynecological operations, as being efficient and non-irritating:

Sulpho-carbolic acid	25 parts.
Rectified alcohol	25 "
Benzoic acid	5 "
Tannic acid	5 "
Glycerin	125 "
Rose water	200 "

For local use.

Sulpho-carbolic acid is composed of sulphuric acid 1 part and carbolic acid ½ part, heated over a water bath for a few moments. Dissolve the benzoic acid in the glycerin, and the tannic acid in the alcohol. —*Gazette de Gynécologie*, Aug. 1, 1887.

AXILLARY ADENITIS.—It is believed by M. Grancher that tubercular diseases of the lungs may, through the mediation of the pleura, infect the ganglia of the axilla. This peculiarity does not appear hitherto to have attracted much attention, and it is thought that the occurrence of such axillary adenitis may not be rare. The knowledge of these facts is regarded as having much importance, not only from a doctrinal point of view, but also from the standpoint of diagnosis; and M. Grancher advises that henceforth every case of phthisis should be examined for axillary swellings, and conversely, that every case of axillary adenitis should be examined for the signs of pulmonary mischief.—*Lancet*, Oct. 29, 1887.

CALOMEL FOR HYPODERMATIC USE.—SMIRNOFF uses a mixture of 1 part of calomel and 10 parts of glycerin, put in dark-glass bottles, with tight glass stoppers, each bottle containing 30 grains of calomel and 5 drachms of glycerin. When to be used the bottle is thoroughly shaken, and the syringe introduced through the wide mouth of the bottle.—*Therapeutische Monatshefte*, August, 1887.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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QUARANTINE DOES NOT DEAL WITH THE MOST DANGEROUS DISEASES.

Under this head DR. HENRY B. BAKER, Secretary of the Michigan State Board of Health, sends us the following paragraphs:

"Relative to the persons who brought scarlet fever to Sutton's Bay, Mich., and who came on the S. S. Ohio, reaching New York September 30, 1887, Dr. Wm. M. Smith, Health Officer of the Port of New York, says:

"'Developed cases of diphtheria and scarlatina arriving on vessels at this port are removed to Ward's Island. It is impossible under the law for the Health Officer or the authorities at Castle Garden to quarantine persons who have been exposed to the contagion of those diseases, consequently the sick on board vessels during the voyage, doubtless, often infect the relatives or those with whom they come in contact, ... and who carry the latent contagion to interior communities. I would be glad if the law allowed those exposed to the contagion of these diseases to be held for observation, as is the case when persons are exposed to the contagion of small-pox.'

"The instance mentioned above is an illustration of what Dr. Smith says—the child having been exposed during the voyage and taken sick with scarlet fever the day after arrival at New York; so the infected child went on its way, to spread scarlet fever. In Michigan at least, ten times as many deaths occur from either scarlet fever or diphtheria as from small-pox.

"Is it not time that the whole subject of quarantine was investigated by the States, and by the United States Government, with a view to protecting the people of this country from the introduction of the really dangerous diseases?"

To the question presented in the last paragraph, we reply that the subject of quarantine and all that relates to the transmission and communication of contagious and infectious diseases from one place or country to another, does most urgently need farther investigation; not, however, simply in the light of present popular theories and etiological assumptions, but by an impartial and thorough study of the whole past history of these two most important classes of disease. Such study will readily develop two great fundamental facts, namely, 1. that there are both specific contagions and infections that are capable of being transported from one place to another in connection with goods, clothing, food, water and confined air, and thereby be brought in contact with the people of the country to which they have been transported; and 2. that such contagions and infections can only propagate disease in such localities as contain the pabulum and material conditions for their own culture or reproduction. And no system of laws or regulations can be devised and enforced that will effectually protect the people of this or any other country from invasions of contagious and infectious diseases that does not equally recognize both these propositions, and exact as much vigilance in keeping every community free from the pabulum on which pathogenic germs feed, as in intercepting their introduction by quarantine and sanitary cordons. Until very recently, the latter has absorbed almost the entire attention of Governments so far as relates to measures for preventing the spread of diseases. And yet no system of quarantine alone has ever proved effectual in preventing the spread of any one of the important infectious epidemic diseases. Neither is is probable that any quarantine alone ever will do so, simply because the contagious or infectious material may be, and often is, carried under conditions that no quarantine officer or other human being can detect its existence or presence.

The case of scarlatina that called forth the paragraphs quoted from Dr. Baker illustrates this fact. The medical inspector certainly could not know that the scarlatina poison was incubating in the child's blood before any symptoms of its existence had developed; and so might one or more passengers have, unbeknown to themselves, some item of infected goods or clothing in their trunks where it remained dormant during the voyage, and how could it be possible for the most vigilant quarantine officer to detect or even suspect which was the infected article? We are not arguing against all forms of quarantine, but only desirous of checking the present tendency to concentrate popular attention too exclusively upon mere quarantine detentions for safety. We think a uniform system of thorough inspection of persons and baggage; quarantine detention for isolation of

the sick, when any are found, and complete cleansing and disinfection of everything contaminated; and the guidance of all well persons to such localities as are most free from the pabulum on which infectious germs may feed, would constitute the best possible safeguard against the introduction of dangerous and infectious diseases from one country into another. And the more effectually the attention of the people of any city or country can be concentrated upon the work of securing for themselves at all times a good supply of pure air, wholesome water, and an uncontaminated soil, the more secure they will be from the invasion or spread of any infectious disease.

THE HÆMO-DYNAMICS OF CEREBRAL HÆMORRHAGE.

"Is there any situation," asks MR. LEONARD BRADDON, "more hopelessly depressing than the attitude of the physician by the bedside of a severe case of cerebral hæmorrhage? So certain of the diagnosis that he seems to view the fatal clot through the very skull, perfectly acquainted with the antecedent pathology and the actual mode of operation of the silent force that, as it leaks, destroys, he yet stands helplessly by, the author only of trivial directions, utterances pathetically oracular."

In an article in the *Lancet*, of October 15, 1887, Mr. Braddon calls attention to certain aspects of cerebral hæmorrhage, which, he believes, afford grounds for the adoption of strong and successful modes of treatment. We know that at the post-mortem examination of a fatal case of cerebral hæmorrhage the most striking feature is the comparatively enormous amount of blood poured out into the brain tissue, and the force which it has exerted in tearing up the cerebral mass. The pressure exerted, thinks Mr. Braddon, is simply a matter of hydro-dynamics. A drop of blood, and then another, and others, escape into the brain substance; every beat of the heart increases the quantity of fluid in the hydraulic chamber, and the destroying force of the extravasation. He calculates the extravasating force of a hæmorrhage 10 mm. in diameter, and a tension in the arteriole of 10 mm., at about 5 atmospheres—more than sufficient to tear the brain tissue apart *outside*, though in the skull the resistance may be greater. "In any event it is evident (1) that the destructive effect of an intra-cerebral hæmorrhage is due to the hydraulic force of the leakage; (2) that as the disruptive power increases in hydrostatic ratio, every second of time is of paramount importance in treatment; (3) lastly, that there is a hopeful method of treatment." If these views be correct, then every hæmorrhage into the brain should, it seems, be fatal. But Mr. Braddon believes it to be only an accident, contingent merely on the matter of rupture, that every hæmorrhage into the brain from an arteriole little smaller than one of the perforating arteries is not invariably fatal. "But one can imagine that (1) the sources of the smaller hæmorrhages are capillary vessels; (2) that in the case of miliary aneurisms, the redundancy of tissue, and in other ruptures fragments of tissue, or clot, may act in a valve-like manner to prevent further leakage; (3) the tendency to early clotting dependent on general (and perhaps unknown local) conditions is, in cerebral as in any other hæmorrhages, the greatest check and natural safeguard against further bleeding."

Admitting the truth of the theory as to the production of the spreading force of the hæmorrhage, the questions with which we are concerned in treatment are, how to check a beginning, and how to relieve the symptoms of a large established extravasation. On this theory, every heart-beat is a force of danger, and every one that can be restrained is a step towards success. In these cases blood-pressure means extravasation, and whatever will lower the one will retard the other, says Mr. Braddon. The horizontal posture, "if it lower the frequency of the beat, increases the blood-pressure within the cranium, the outflow from which gravity, best brought to bear in an upright attitude, especially assists. Cold externally means congestion inside. Starvation and cold food mean foregoing the immense advantage of attracting as much blood as possible to the portal system, and so lowering the supply elsewhere. Narcotics producing sleep, during which the brain is anæmic, could not be certainly injurious; and although of doubtful utility in the presence of better drugs, in their absence opium ought not to be despised; it lowers the blood-pressure and relieves the brain." The giving of purgatives Mr. Braddon regards as an open question. We know that Trousseau made his patients sit up, take food, and if possible, exercise. More important than all else in the way of medical treatment, says Mr. Braddon, is the giving of drugs that lower blood tension, such as nitrite of amyl, the nitrites generally, pilocarpine and other tension-reducing drugs, and warmth to the hypogastrium and the hot bath.

But the simplest, most potent, the most readily applicable, yet most ignored remedy of all, says the author, lies in surgical procedure. We cannot reach the lesion; we must, then cut off the supply of blood by applying pressure to the nearest main

trunk. When the seat of hæmorrhage is diagnosticated we should compress the carotid on that side, keeping up the pressure for several hours to give the ruptured vessel time to be occluded by a clot. In grave cases, and in those in which the seat of the lesion cannot be diagnosticated, both carotids might be compressed. When continuous pressure cannot be applied, he thinks the carotid should be tied, though of course this could completely arrest the bleeding when it comes from a branch of the external carotid. About three years ago Mr. Braddon tried compression of the carotid, and with success.

In the more severe and more frequently fatal cases, in which the patient is comatose when first seen, breathing stertorous and slow, pupils dilated, etc., after compression of the carotid, Mr. Braddon recommends trephining for the purpose of at once reducing the intra-cerebral pressure. This was the effect of trephining in a case reported by Mr. Howse to the Clinical Society of London, and in a case reported in the *Lancet*, August 20, 1887. When the disc of bone was removed the symptoms were immediately alleviated. In this day of cleanly surgery meningitis is not to be feared, and it cannot be regarded as heroic surgery to trephine, pass a trocar, bistoury or probe into the brain-substance to reach the mass of blood. Increase of hæmorrhage need not be feared, as we well know the effect of the admission of air to bleeding cavities. If in this way the surgeon can tide the patient over the immediate danger, and will keep the wound clean, he need have no fear as to the clot—it will be absorbed.

TAMPONING THE UTERUS IN HÆMORRHAGE.

Fraipont calls attention (*Annales de la Société médico chirurgicale de Liège*) to the value of tamponment of the uterine cavity by means of iodoform gauze in certain cases of severe uterine hæmorrhage. The gauze should be used in large pieces, supple and thin, and may be left in the cavity for one, two or three days; the cavity having been washed out with a carbolic acid or sublimate solution. Under its use, says Fraipont, there is no retention of secretions and no decomposition. If the gauze be well pushed in it serves as a filter to carry off the secretions, which are considerably diminished, and to deodorize and disinfect them. The pieces of gauze act as foreign bodies in the uterus, causing it to contract and arrest hæmorrhage.

To permit the introduction of the gauze the cervix must of course be dilated. Fraipont has made use of the gauze tampon after operations, such as abrasion of hyperplastic mucosa, excision of pediculated polypi, or enucleation of encapsulated submucous fibromata, in cases of abortion in which the ovum and membranes were expelled or removed, after pathological or normal labors, when hæmorrhage is due to atony of the uterine muscle. After every operation on the interior of the uterus Fraipont washes the uterine cavity with a 2 per cent. solution of carbolic acid heated to 42° or 44° C. Sometimes this is sufficient to momentarily arrest the hæmorrhage, but this generally returns after a quarter of an hour, when the action of the hot water has passed off. But to prevent any hæmorrhage, as soon as the solution returns clear the cavity is stuffed with pieces of iodoform gauze. A tampon of oakum or tow, impregnated with borated glycerine, is placed against the cervix. The vaginal tampon is omitted. Dührssen, of Berlin, (*Centralblatt für Gynäkologie*, No. 35, 1887) has also used this tampon in two cases of post-partum hæmorrhage in which all other measures failed.

For the introduction of the tampon the woman is placed in the obstetrical position, the posterior wall of the vagina is exposed by means of a Sims' or Simon's speculum, and the anterior lip of the cervix is seized with bullet forceps and moderately drawn down. Several bands of iodoform gauze, an inch wide and about 40 inches long, are ready at hand; the end of one of them is carried into the cervical cavity with a pair of dressing forceps, and it is then gently pushed into the uterus with a uterine sound. The outside end is retained at the cervix, and a second piece is introduced until the uterine cavity is filled. If there be need of haste larger and larger pieces of gauze are used. It may be necessary to repeat the tamponment after 20 or 36 hours, using a smaller quanty, it may be.

TRANSACTIONS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.

Knowing that the Executive Committee of the recent International Medical Congress in Washington had made every possible arrangement for the early and proper publication of the Transactions of that body, we recently sent a note to the Secretary-General, who is also Chairman of the Printing Committee, asking what progress was being made, and promptly received the letter given below. By its perusal, our readers will see that the work of eleven of the eighteen Sections and of the General Sessions is completed, and either in the hands of the printer or ready to go there, while the manuscript belonging to Sections 7, 9, part of 10, 12, 14, 17, and 18, has

not yet been returned to the Secretary-General. It is to be hoped that the officers of these seven Sections will complete their returns as speedily as possible, that the work of the Printing Committee may not be embarrassed and the early appearance of the volumes of Transactions be deferred.

WASHINGTON, D. C., NOVEMBER 9, 1887.

Dr. N. S. Davis,
President late International Medical Congress,
Chicago, Illinois.

Dear Doctor:—You ask in regard to progress on the "Transactions," and in reply I have to say that the proceedings of the General Sessions, and of Section 1, are all in type, and the type cast. Sections 2, (General Surgery), 3, (Military and Naval Surgery), 4, (Obstetrics), and 5, (Gynæcology), are in the hands of the printer. Section 6, (Therapeutics, etc.), will go forward to-day. Section 7, (Anatomy), manuscript not received. Section 8, (Physiology), ready to send to printer, as soon as Section 7 is in hand. Section 9, (Pathology), manuscript not received. Section 10, (Diseases of Children), partly received. The part on orthopædics, which was delegated to Dr. Judson, by Dr. Smith, has not been received. Section 11, (Ophthalmology), is in hand and ready for the printer. Section 12, (Otology), manuscript not received. Section 13, (Laryngology), is on hand. Section 14, (Dermatology), manuscript not received. Section 15, (Hygiene), and 16, (Climatology and Demography), ready to send. Section 17, (Psychological Medicine and Diseases of the Nervous System), and 18, (Dental and Oral Surgery), manuscript not received.

In regard to reprints the printers have been instructed to furnish authors reprints on such terms as may be agreed between them, but they will not be furnished until the plates have been used for the printing of the "Transactions." Very truly yours,

JOHN B. HAMILTON.

CONDITION OF THE CROWN PRINCE.—The physicians of the Crown Prince Frederick William declared last Monday that the throat affection was cancerous, and that partial removal of the larynx is not advisable, though the physicians at San Remo recommend complete extirpation, which is objected to by the patient.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF VIRGINIA.

Eighteenth Annual Meeting, held in Richmond, October 18, 19, 20 and 21, 1887.

(*Concluded from page 631.*)

WEDNESDAY, OCTOBER 19—SECOND DAY.

AFTERNOON SESSION.

Dr. H. M. Clarkson, of Haymarket, Va., read a report on *Advances in Obstetrics and Diseases of Women and Children*, that have been established in the last year or two.

Dr. E. M. Magruder, of Charlottesville, Va., next read the report on *Advances in Chemistry.*

DR. HERBERT M. NASH, of Norfolk, Va., read a paper on

THE IMPORTANCE OF AN EARLY DIAGNOSIS OF OCCIPITO-POSTERIOR POSITIONS, WITH SUGGESTIONS AS TO THEIR MANAGEMENT.

He stated that his paper was not intended as a scientific disquisition on the subject discussed, but a paper, in which he did not enter upon a description of the causes or mechanism of these positions, their frequency being now admitted by most obstetricians; but contended that the vertex did not rotate to the symphisis pubis as often as is believed; that the flexion and rotation of the head should be accomplished by art, and not trusted to chance; and that when the vertex is not thus brought to the symphysis, the labor is rendered protracted and severe, an unnecessary draught made upon the endurance of the mother, and in the primipara the labor otherwise may be dangerous, with great probability of a perineal rupture serious in extent.

In cases of labor in the first stage, where the pains are lingering and unsatisfactory, with little or no descent of the head, and especially where there has been an early loss of the waters, he always suspects malposition, and usually finds the large fontanelle at the left acetabulum, with the vertex to the right and rear.

If the position cannot now be made out with the index finger, he chloroforms his patient and introduces the whole hand into the pelvic cavity, when all doubt is readily dispelled.

If the occiput is found to the right and posterior, he uses preferably the left hand, palm to the head of the child, passing the fingers upwards and backwards over the vertex, pulls down the vertex with the bent fingers, while pushing up the forehead with the ball of the hand. After flexion is thus secured he counsels a continuance of the traction, during the prevalence of the pain, by the nails hooked over or onto the projection of the parietal bones (of the child) beyond and over the occipital bone.

When the fœtal head is found impacted or immovable, he reinforces this maneuvre by the right hand applied to the lower abdominal wall of the mother, and thus raising the whole uterine mass, and rendering the flexion and rotation of the head feasible by the pelvic hand.

When this procedure is accomplished the pains, before futile, now become effectual, and the labor proceeds as in ordinary occipito-anterior positions. This mode of practice necessitates an early recognition of the position, and the exercise of some exertion and skill on the part of the accoucheur at the outset of the labor, but saves much suffering and frequently the resort to instruments at a later stage. He cites a few cases from consultation practice, merely as instructive, and to show how these positions often annoy and confuse intelligent practitioners.

THURSDAY, OCTOBER 20—THIRD DAY.

The Secretary presented the *Report on Advances in Surgery*, the author, Dr. R. C. Powell, of Alexandria, Va., being prevented from attending by the illness and death of Dr. Albert Fairfax, a Fellow of this Society. Dr. I. S. Stone, of Lincoln, Va., read a paper on *Uterine Colic*.

CASTRATION NOT THE CURE FOR VENEREAL DESIRE.

DR. I. R. GODWIN, of Fincastle, Va., read the *Report on Advances in Anatomy and Physiology*. In this report he mentions the case of a male inmate of the Southwestern (Va.) Lunatic Asylum, on whom castration was performed for cure of masturbation. The operation had been performed several years before he was sent to the asylum. Marriage had had no curative effect over his habit, and his wife left him in disgust. The operation of castration, done at his own earnest solicitation, had been so thoroughly done that not even a vestige of the scrotum was left. But as a result of the castration, not only has there not been a cessation of sexual desire, but he is as capable as ever of erections, and is as capable as ever of having sexual intercourse. The sexual orgasm is but slightly obtunded, and the act is completed by the ejection of mucus mixed with the secretions from Cowper's and the prostate glands, and the vesiculæ seminales. The desire for masturbation still continues; nocturnal emissions have not ceased, and the man threatens and has attempted suicide. It would seem from this case that castration does not destroy sexual desire, nor does it cure masturbation; nor does it produce the desired moral impression that we would expect to have in cases of insanity brought about by masturbation.

DR. WILLIAM A. HAMMOND said that in making eunuchs it was the custom to cut out the testicles and all appendages. It is not considered safe to leave even a tenth part of the scrotum or any of its contents. And yet with this complete ablation there are instances of the continuation of the venereal desire. It cannot be denied that the sexual appetite resides in the brain, but in what part he is unable to say. It is well known that criminals in being executed by hanging frequently have seminal emissions. This effect no one would pretend to say was due to venereal excitement in the usual sense of the term; but it does show that the centre controlling the discharge of the seminal fluid is to be located high up in the nervous system. It is further well known that extirpation of the ovaries does not necessarily diminish the sexual appetite in the female; and these organs must be taken as the analogue of the testicles. The testicles and ovaries must be considered, so to speak, as intermediate stations along the nervous track for the discharge of venereal impressions that have previously been received. Years ago the Missouri law called for castration as the punishment of rape in certain cases; and yet efforts at rape had been committed by persons who had been castrated for this very crime. He mentioned several cases that had come to his knowledge in which the sexual desire did not seem to be materially, if at all, decreased by castration.

DR. ROBERT BATTEY, of Rome, Ga., in response to the call of the Society upon him for remarks on this subject, stated that his experience had included observation of but one case of the effects of castration in the male. During the war, when Gen. Sherman was making his historic march to the sea, a colored man was arrested in Middle Georgia for rape. The confusion of affairs at the time made it impossible to take the usual legal proceedings in the case. Hence under a judgment of his neighbors he was castrated. But it did not seem to have the intended effect of destroying his propensity for women, for he continued to have intercourse with any woman with whom he could gratify his passion, each intercourse being gratified by the ejaculation of a discharge. Of course it was not seminal fluid, for the secreting organ was entirely removed. He has known the sexual appetite to continue likewise in the female after the perfect removal of the ovaries and clitoris. Early in his experience as an ovariotomist he announced that "Battey's operation" was not a reliable remedy for nymphomania. Some women, indeed, say that their sexual appetite has not been affected by the removal of their ovaries, etc. In rare cases, in fact, the extirpation of the ovaries seems to have increased the aphrodisiac nature; but this apparent effect may be easily accounted for by the want of pain which accompanied the marital relation prior to the removal of the ovaries. He then cited several cases in illustration. It seems to him easy to account for this state of things. He still adheres to the views expressed on this subject in 1873 before the Georgia Medical Association. He compares the ovaries and testicles, in their developing stage, to a school master, who day by day impresses lessons upon the nervous system or centres. As the boy or girl loses his or her teacher, the child does not lose thereby what it has learned, but without further education there is no further development. It simply *retains* the impressions already made. If the woman had developed the venereal appetite prior to the removal of the ovaries, it is more than probable that that desire will remain after the operation, just about as excitable as it was before the operation. He does not, however, believe that it has ever been shown that where the ovaries were removed previous to development of the venereal desire, the woman operated on has ever developed as anything of an aphrodisiac. There is no case known to him where the ovaries of a girl have been removed who ever afterwards developed fully as a woman; and he doubts if such a case will ever occur in the experience of any one.

The following were then elected

OFFICERS FOR THE ENSUING YEAR.

President—Dr. Benjamin Blackford, of Lynchburg, Va.

Vice-Presidents—Drs. H. M. Clarkson, of Haymarket, J. Grammer, of Halifax C. H., and W. D. Turner, of Fergusson's Wharf.

Recording Secretary—Dr. Landon B. Edwards, of Richmond.

Corresponding Secretary—Dr. J. F. Winn, of Richmond.

Treasurer—Dr. Richard T. Styll, of Hollins.

Committee on Publications—Drs. C. W. P. Brock, George Ross and Hugh M. Taylor, all of Richmond.

Chairman Executive Committee—Dr. W. W. Parker, of Richmond.

To deliver the Address to the Public and Profession during the Session of 1888—Dr. William T. Walker, of Lynchburg.

Place of Meeting of the Session of 1888, Norfolk, Va.; the time to be sometime in November after the 10th.

The following was adopted by a large majority, after the failure of numerous efforts to amend the resolutions as offered by Dr. Thomas J. Moore, of Richmond:

WHEREAS, It has been demonstrated that the provision of the law "Regulating the Practice of Medicine and Surgery" in Virginia, allowing applicants for examination for license to practice in this State to appear during the vacations of the Medical Examining Board before three individual examiners, is a defect in the law, and

WHEREAS, The high mission of the Medical Examining Board of Virginia is seriously hindered thereby, therefore be it

Resolved, That the Legislative Committee of this Board, together with a Committee to be appointed by this Society, be requested to petition the Legislature to repeal that provision of the law allowing applicants to appear before three individual examiners.

The President appointed Drs. Wm. S. Christian, of Middlesex county, E. W. Rowe, of Orange county, and J. E. Chancellor, of Albemarle county, as the Committee on the part of the Society.

On presentation by Dr. C. W. P. Brock, of Richmond, it was

Resolved, That the Committee appointed on the above resolution be also requested to have the law so amended as to require every candidate appearing before the Medical Examining Board of Virginia, to present a properly attested diploma of graduation in medicine from some regularly chartered medical school or college before he can be entitled to examination.

DR. J. E. CHANCELLOR, as a matter of privilege, asked that his resolution of yesterday, asking that the Legislative Committee request the Legislature to so change the existing law as to reduce the number of the Medical Examining Board from 32 of the regular profession to 12, and the homœopathic members in like ratio, be now incorporated as a part of the present proceedings. Granted by a vote of 81 to 6.

On presentation by DR. I. R. GODWIN, of Fincastle, it was

Resolved, That a Committe be appointed by the President to memorialize the Legislature of Virginia in regard to the fees allowed physicians for examinations of lunatics—the fee at present being only that of any ordinary witness.

During recess, DR. HUNTER MCGUIRE, by appointment, performed the operation of

SUPRA-PUBIC LITHOTOMY

on a young man. Consent was obtained to operate in the Senate Chamber—perhaps the first surgical operation ever performed in the Hall—with a gratifying result up to the date of this report.

AFTERNOON SESSION.

In the absence of the President and Vice-President, Dr. W. D. Turner was called to the Chair.

DR. A. S. PRIDDY, of Keysville, Va., read a

REPORT OF A CASE OF PISTOL SHOT WOUND OF THE ABDOMEN, TREATED BY LAPAROTOMY AND SUTURING THE WOUNDED INTESTINE.

(See p. 649.)

DR. J. R. SOWERS, of Warrenton, Va., read a

REPORT OF A CASE OF ABDOMINAL SURGERY FOR INTESTINAL OBSTRUCTION,

which had come under his care. Man, aged 68, had protracted and obstinate constipation. Painful peristaltic actions of the bowels persisted, with gurgling noises. Could not precisely locate the pain. No very great distension, no fever—in fact temperature a little below normal. During the previous three weeks, he had not passed more than a tablespoonful of fœcal matter from his bowels, but had had frequent stercoracious vomitings until within the past few days. Previous health good, except an inguinal hernia for the past twenty years; but there was nothing to indicate that the hernia had anything to do with the present trouble. Appetite had failed, purgatives had failed, and enemata and the rectal tube did not tend to open his bowels. Dr. Shirly Carter (the family physician) and Dr. Alex. Harris both agreed that laparotomy was necessary. Dr. Sowers made an incision 5 inches long, in median line below the umbilicus. Peritoneum opened on a director. Not more than a tablespoonful of blood was lost in the operation. Passing hand into the abdomen, after careful search, finally found a hard nodulated mass in the small intestine in the right inguinal region. It was a coil of ileum adhered to the cæcum and ascending colon by what felt like a sarcomatous growth. Another nodulated mass was found in the transverse colon. About a half gallon of fluid was in the peritoneal cavity, which was removed by sponges. As the pathological condition precluded any relief by surgical measures, the intestines were carefully returned and the incision brought together. Nothing notable occurred until the sixth night when he vomited a large quantity of blood—perhaps a quart—and then grew weaker and weaker until he died on the ninth day.

DR. L. ASHTON, of Falmouth, remarked that all cases of visceral wounds of the abdomen should be thoroughly explored, as hæmorrhages, extravasations of fœcal matter, etc., will surely kill unless promptly treated. During the past three years, 38 cases of laparotomies for gunshot wounds of the abdomen have been reported with all recoveries. Dr. Senn reports several cases where the wounds in the bowels had been closed by his decalcified bone plates, and in from 12 to 18 hours, the wounds were found adherent, and closed by plastic material. In regard to

Lembert's suture, be careful not to put in too many and do not draw them too tight, so as to intercept vascular supply. He would use catgut ligatures instead of silk. But whatever sutures one prefers, be careful not to obstruct venous circulation.

Dr. George Rohé of Baltimore, by invitation, read a paper on

THE VALUE AND PROPER USE OF ARSENIC IN SKIN DISEASES.

He cited experiments to show that arsenic modifies especially the nutrition of tissues derived from epiplastic layer of the embryo, the skin and nervous system. The fact that it produces hyperæmia of the skin renders it inappropriate in most cases of acute inflammation, such as *acute* eczema. But in *chronic* eczema, especially its papular and scaly forms, and in the pustular form occurring on the face and scalp of strumous children, combined with iron and cod-liver oil it is useful. In pemphigus, arsenic acts as a specific. It is a sovereign remedy also in psoriasis. Of course use the local remedies in addition. Arsenic acts as a tonic in syphilitic eruptions, but it is of limited value in acne, most cases of the pustular form being made worse by it. As an exception, however, it often acts like magic in menstrual acne in young women. In the rare disease in this country, lichen ruber, arsenic maintains the reputation given it by the elder Hebra. Dr. Rohé uses in appropriate cases, two preparations: arsenious acid in substance, and the solution of arsenite of potash. Arsenic often fails to do good until after some preparatory treatment. To children, he generally gives small doses of calomel every three hours for three or four days. Then two or three drop doses of Fowler's solution two or three times daily, increasing the dose by a drop or so daily until its physiological effects are produced, soon accomplish all the good that it is capable of doing. The dose is diminished then according to circumstances. He rarely continues the mercurial preparatory treatment in adults more than a couple of days; then he gives the following for ten days, the diuretic action of which seems to prepare the system to derive the fullest benefit from the arsenical course:

℞. Potassii acetate..... ʒij.
Ext. taraxaci fl..... ʒij.
Aquæ, q. s. fit..... ʒij.
M.

S. Teaspoonful in a tumblerful of water, three times a day, a half hour after meals.

When ordering arsenious acid in substance, he prefers tablet triturates of about $\frac{1}{50}$ grain each; more frequently, $\frac{1}{100}$ grain each. He generally precedes a dose to be taken between meals by a glass of milk. In this way, he has given a $\frac{1}{4}$ grain of arsenious acid daily for two months without any unfavorable effect. He directs Fowler's solution with sherry wine or cinnamon water; or for children, equal parts of simple syrup and cinnamon water. As long ago pointed out by Mr. Hunt, the smallest toxic dose of arsenic is fifty times as large as the average medicinal dose. Hence the dangerous poisoning by medicinal doses of arsenic is exceedingly remote; and further, cumulative effects need not be feared, as the drug is rapidly eliminated. He sums up, that arsenic, properly used, is a most valuable means of combatting certain skin diseases—most prominently, papular eczema, psoriasis, lichen planus, and pemphigus; that when intelligently used it is not toxic, and is harmless, and that it is rapidly eliminated from the system, and hence cannot act cumulatively as a poison. Appropriate local treatment is, of course, to be used in every case.

Etiology of Zymotic Diseases, was the title of the next paper, presented by Dr. M. A. Rust, of Richmond, Va. Papers were also read, eliciting more or less discussion, by Dr. Wm. A. Hammond, of New York, on *Coca, and the So-called Cocaine Habit;* Dr. Charles M. Shields, of Richmond, Va., on *Advances in Ophthalmology, Otology and Laryngology;* Dr. Joseph A. White, of Richmond, on *Sore Throat and Accompanying Nasal Troubles;* Dr. G. S. Conrad, of Mattly Hill Sanitarium, on *Moral Insanity;* and cases of some interest were reported by Drs. Wm. D. Hooper, of Liberty, Va., R. B. Stover, of Richmond and E. M. Magruder, of Charlottesville.

The social events of the Session, were a complimentary entertainment at the theatre and a banquet by the Medical College of Virginia; receptions by Drs. Hunter McGuire, Joseph A. White and Charles M. Shields, and a banquet by the Profession of the City of Richmond.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, September 28, 1887.

The President, J. Solis-Cohen, M.D., in the Chair.

(*Concluded from page 636.*)

Dr. James Collins read a paper reporting some

PECULIAR SEQUELÆ OF MEASLES.

Measles is usually considered a very simple affection. The respiratory organs and eyes are usually watched. This being accomplished, and care that aural catarrh is not developed being exercised, measles is considered as having been properly treated. During the recent epidemic I witnessed some sequelæ from measles in which the nervous system seemed to be especially involved.

Case 1.—A girl of 8 years. The fever, eruption, and desquamation followed the usual course; and not until several days after the skin had resumed its normal color, and the bronchitis had disappeared, did the symptoms of chorea develop. This child was a blonde, of Irish parentage. The invasion of the nervous symptoms was gradual, but they developed to a violent degree. During the second week the agitation of the child was so great that she could not remain upon a sofa without being guarded or tied. She was unable to feed herself, and was constantly laughing and giggling, as well as twitching. Cimicifuga, tonics, and applications to the spine were used. The child recovered and was well at the sixth week.

Case 2.—A girl of 11 years, of German parentage,

a dark blonde, also developed chorea, but in a less violent degree. Similar treatment was pursued, and recovery was complete in the fourth week.

The marked nervous element in these cases causes them to be worthy of note.

Case 3.—Kate A., aged 3½ years—the second case of measles in the house. Eruption appeared at a normal period, and followed the usual course. Catarrhal symptoms not more marked than usual. Temperature not above 103°, pulse 110 at highest point.

On the third day of the eruption she exhibited a peculiar irregular kick while in bed. Examination revealed that the reflexes of the ankle and knee were exaggerated; while the ability to stand was greatly impaired, and the coördination of the movements of the lower extremities was imperfect. On the following day she was unable to sit up in bed, the arms kept in irregular motion, while the power of grasp was almost lost for small objects. By the fourth day, hearing was impaired, and by the seventh day eyesight was lost, and action of the sphincters became uncertain. Blind, deaf, and powerless for self help, this poor child for five weeks kept up an idiotic cry, with irregular swinging and aimless motion of arms and legs. The special senses gave some objective evidences of such a grave condition. The eye-ground showed the arteries tortuous; veins full; choroid congested; disk seemed to be choked in either eye. Dr. Lautenbach, who is skilled in the use of the ophthalmoscope, assured me, however, that the condition was that of a swollen disk from active inflammation, and not a true choked disk. Membrana tympani of both ears normal. From a hyperæsthesia of the reflexes there resulted a condition of impaired sensation, with subnormal temperature, as a rule. After five weeks under the use of absorbent alteratives, and counter-irritation to spine, the child began to improve, and after twelve weeks commenced to walk and see; hearing was slow to return. The reflexes of bladder and rectum also became normal. Yet the child continued nervous, irritable, howling with raucous voice when disturbed or denied any of her wishes.

During the summer she has gradually improved; now walks with gait somewhat wabbling. She eats well, sleeps well, and nourishes well. Her temper is irascible; she drags the right foot, and falls easily. The motion and use of the upper extremities appear to be normal. Hearing nearly normal. Eye-ground shows evidences of some structural changes; vessels still small and tortuous, some choroiditis remains. Vision has improved so that she can distinguish objects, but my last attempt to test it accurately resulted in ignominious failure.

Urine has shown neither albumen nor sugar. Specimens examined were of normal specific gravity, and deposited phosphates on standing.

The following case presents some peculiar conditions:

Case 4.—Edward L., aged 9 years, had measles in March, 1886. The attack was severe for four days; and in spite of treatment the recovery was slow. He complained of severe headache, and of seeing double at times. During the spring and summer he seemed to be tolerably well, excepting headache, from which he suffered frequently. In July, 1886, his headaches increased. At times his head seemed to be drawn either backward or to one side, the paroxysms lasting four or five minutes, after which he would complain of seeing double. On closing the left eye, vision improved; at times vomited his food with glairy mucus. The lad improved under treatment. Spells of headache became less frequent. As he complained of his eyes, examination showed hypermetropia of 1 D. right eye, 2 D. left eye, with astigmatism in left eye. The optic disk of left eye swollen, right less so. Glasses given in November improved vision, but headache was still persistent at intervals. He got along tolerably well until February, 1887, when headache returned with increasing violence; his gait became unsteady, and double vision increased, becoming almost constant.

In April he was taken to a specialist, who added prisms to his glasses, which, for a time, improved his vision. In May his headaches became violent again; he suffered from attacks of nausea; his gait became more uncertain; he stiffened his feet in walking, and staggered with uncertain movements, frequently falling, but seemed in good spirits; temperature subnormal. Urine pale, passed in large quantities, but neither sugar nor albumen detected. Since July the lad has lost flesh; loses his food by vomiting frequently; often the matters vomited are undigested food with glairy mucus, of yellowish tinge. Pain in head always present before vomiting; head thrown backward; belches, often has hiccough. Temperature subnormal; hands and feet usually cold. Generally sleeps well.

The condition of his eyes as I have seen them, and confirmed by Dr. Isett, who is practised in the use of the ophthalmoscope, show both disks swollen; the arteries small and tortuous; veins large, tortuous; choroid congested. Dr. Isett adds, "no doubt there is pressure on the brain somewhere." The treatment of this lad has been tonic, alterative, and dietetic. The case presents a peculiar outcome from measles.

I report these to elicit further reports of such cases, and for the sake of calling attention to the effects of measles on the nervous system, which, in these cases, seems to have suffered severely.

DR. WILLIAM B. ATKINSON said: During the last epidemic of measles I saw more cases of inflammation of the lungs than in any previous epidemic within the last thirty-five years. Catarrhal sequelæ were extremely common. I have not met with the eye troubles, nor have I seen any evidences of brain affections. I recall two cases, some fifteen years ago, in which the eyes and the brain were so affected that vision was entirely lost. In one case the vision returned after a period of fifteen months, and the child recovered perfectly. In the second case, that of a child 18 months of age, the vision was perfectly restored at the end of eight or ten weeks. I attribute the restoration of vision, in the first case, largely to the use of phosphorus, which, with intervals of rest, was continued for a year.

Dr. Wm. M. Welch said: I have never met with the sequelæ referred to by Dr. Collins, but I believe that reference is made to them in elaborate text-books. Such sequelæ are, I think, more frequent after small-pox than after measles. I have seen the hearing and speech affected during recovery from small-pox, but never from measles. The author of the paper referred to subnormal temperature after defervescence took place. I have noticed this, and also unusual slowness of the pulse. In adults I have frequently found the pulse under 50, when in the recumbent posture.

Dr. E. T. Bruen said: The question whether or not in these cases, where nervous symptoms have been prominent, there is any lesion of the nervous system, has always been an interesting question to me. I recently had the opportunity of making a post-mortem examination in a case of typhoid fever where nervous symptoms had been well marked from the second week onward. The patient had always been regarded as an hysterical individual. There was spasm of the muscles of the back of the neck, with retraction of the head to the right side. Also spasm of the right arm, with contraction of the muscles, and the right leg was similarly affected. The pupils always responded to light, and there was no paralysis of any muscle. The patient died, and in my absence the post-mortem examination was made by Dr. Musser. The only abnormal condition found in the brain was the presence of two cysts, one in each fissure of Sylvius. These were about the size of a walnut. They contained clear fluid. There was no evidence of inflammation or of the presence of hydatids. It is a question whether or not these cysts were congenital. This case shows that there may be marked nervous symptoms without special lesions, and at the same time may we not imagine that some of these cases of severe nervous symptoms in the course of the specific fevers may occur in consequence of imperfect development of the cerebral substance? The only case in which I can recall symptoms similar to those described by Dr. Collins was in a child 4 years of age, and the result of this case was permanent insanity.

Dr. J. H. Musser reported some

CASES OF PURPURA HÆMORRHAGICA AND LEUCOCYTHEMIA FROM PRIVATE PRACTICE.

Case 1.—Middle-aged female, free from the hæmorrhagic diathesis, in her usual health, after an attack of gastro-enteritis seized with persistent œsophageal hæmorrhage. Diagnosis not determined. After five weeks, general purpura. Death from retro-peritoneal hæmorrhage. There was difficulty in making a diagnosis until the external evidences of purpura were seen. In fact, a provisional diagnosis alone could be made. By the absence of hydrochloric acid in the gastric contents, one might presume carcinoma to be present, and yet collateral evidence could not be found to confirm the suspicion. Persistent hæmorrhage, without patent anatomical cause, extending over a period of weeks, may be the forerunner of the general hæmorrhage which characterized purpura hæmorrhagica. Indeed, it is possible a single leakage causing death from exhaustion, may be the only expression of this grave disease.

It is interesting to speculate on the cause of the ulceration found in the œsophagus. Was it present before or subsequent to the gastro-enteritis? It doubtless was due to thrombus, which might have lodged while the vomiting was in progress.

Deaths from purpura are very rare; with the case just detailed, the following may be of interest. The recognition of the nature of the disease was easy.

Case 2.—F., male child, aged 5 months, fed on condensed milk. Never of robust health. Skeleton undoubtedly rickety. Family history good. Never hæmophilia. Irregular, disseminated purpuric spots, on trunk and limbs—first appearing two weeks ago. Now universal hæmorrhage; considerable exhaustion. The subcutaneous hæmorrhages were of two kinds—areas of irregular, tender, deep infiltrations, and round and irregular petechiæ, often with a red centre at first. In addition, capillary cutaneous oozings were observed. A small spot under the skin would break, and a blot clot form on the surface of the skin. Several of the points bled continuously, being restrained only by styptics. An autopsy could not be obtained.

It is to be regretted that in neither of the cases was an examination of the blood made for the microbes of this affection, described by Cheyne.

Case 3.—Man, æt. 49. General failure of health, marked by a series of severe attacks of illness. Final illness characterized by stupor and coma, low delirium, incontinence of urine and fæces; by dyspnœa and cardiac asthenia; by gastro-intestinal disturbance; by fever and sweats.

The case was of extreme interest. All the organs of the body appeared to be normal. Septicæmia from pus in some part of the body could not be determined, because the purulent foci could not be found. That the cerebral disturbances were not due to renal or hepatic disease was evident. Organic brain disease could certainly not have been coincident, on account of the absence of symptoms indicative of such disorders. Malarial and lead toxæmia were excluded for want of evidence. Unfortunately, the ophthalmoscope was not used. Only very late in the illness was the enlargement of the glands in the axilla observed. It was then learned that with each period of poor health these glands would enlarge and grow tender. The enlargement was not great, however, and could readily have been overlooked. The patient was so ill when the hypertrophy was discovered that, in obedience to the friends' wishes, the blood was not examined. The diagnosis of the affection, therefore, was not made, because two most valuable instruments of precision, the ophthalmoscope and hæmocytometer, were not used.

Case 4.—Rapid enlargement of the lymphatic glands, the liver, and the spleen, in a young boy. Enormous increase of white corpuscles; asthenia and anæmia; herpes and subcutaneous hæmorrhages; pneumonia. Duration five weeks. Diffused tuberculosis of the lymphatic glands and leucocythæmia, alone, were considered in the study of the case. After Fagge, we would consider the age, the absence

of fever and emaciation, the enlargement of the liver, the absence of any caseating gland, the rapid course of the disease—all against the likelihood of tuberculosis.

The microscopical examination of the sputum did not go for much, as from the nature of things the boy could not cough or expectorate freely, and hence sputum from the lungs was not obtained. The physical signs in the lungs might be due to enlarged bronchial glands, although their hypertrophy is rare in leucocythæmia. The lad was so ill we could not insist, after the blood examinations, on using the ophthalmoscope. Its use would have been of great service. Nevertheless, the diagnosis of leucocythæmia we deem quite correct. The occurrence of an unusually large crop of herpes labialis was peculiar and instructive. The physical signs in the lungs have been spoken of. The herpes, the blood-stained mucus expectoration, the fever—which subsided in due time—the extreme dyspnœa, and the occurrence of dulness and bronchial breathing, taken together, warrant fully the diagnosis of pneumonia, and, we take it, this inflammatory affection complicated the leucocythæmia.

DR. W. D. ROBINSON: Some time ago I treated some twenty cases of phthisis by the Bergeon method. Three or four of these suffered with purpura. The purpuric spots rapidly disappeared while this treatment was continued. I then made a search for purpuric cases in the penitentiary, and found fifteen. These were placed on the use of gaseous enemata, and the spots rapidly disappeared. In three cases there was a slight return on the cessation of the treatment, but when the gas was again employed the spots entirely disappeared. During the past three months these cases have remained perfectly well. I have also had three cases of leucocythæmia, and these have made more decided improvement under the use of gaseous enemata than with any other form of treatment.

DR. C. D. F. PHILLIPS, of London, Eng., being invited by the President to take part in the discussion, said: The speaker has referred to leucocythæmia. I should like in this connection to say a word with reference to the action of quinia on the spleen. I have found in a large dog that, after the injection of one, two, or three doses of sulphate of quinia into the jugular vein, there is a marked contraction of the spleen, which may continue for two or three hours. The blood-pressure rises invariably during the experiment. I have also experimented upon the liver, and I think that we shall be able to prove that quinia also produces contraction of the liver. I would make one other remark, although it has no bearing on the case reported. Caffein is useful in certain forms of congestive headache, and in order to find an explanation of its action in these cases, I removed a large portion of the cranium and dura mater of a dog, and then injected caffein. There was a visible contraction of the vessels of the brain. In another dog, prepared in the same way, I applied a solution of the caffein directly to the brain, and the contraction of the vessels was much more distinct. I think that the beneficial effect of caffein in cases of congestive headache is accounted for by its effect upon the vessels.

DR. G. E. DE SCHWEINITZ: As is well known, the orange-yellow choroid, the broad, pale, often tortuous retinal veins, and the retinal hæmorrhages present in leukæmic retinitis a remarkable picture. Some time ago a young colored man came to the hospital complaining of defective vision, which was reduced one-half. The ophthalmoscope revealed a widespread retinitis, with hæmorrhages, and on account of yellow spots arranged concentrically around the macula, the presence of albumin in the urine, and high tension in the arteries, this was supposed to be a case of albuminuric retinitis. The man disappeared for six months, and when he returned a more careful examination of the eye ground cast doubt upon the original diagnosis. Dr. Osler, too, when the case was referred to him, speedily made a diagnosis of leucocythæmia, and the blood showed a truly extraordinary increase of the white corpuscles. The yellow spots in this case were due to a diapedesis of white corpuscles, and not to fatty degeneration, as they are in albuminic retinitis. The combination of renal disease with this disorder may lead to retinal appearances identical with those found in primary kidney trouble, in addition to those manifested by leucocythæmia. In this case the albumin was due to the pressure of the enormously enlarged spleen. I think that Dr. Musser might have derived diagnostic aid from the use of the ophthalmoscope in his first case of purpura, because, had he found the retinal hæmorrhages quite common in this affection, the case would have been sharply separated from the hepatic disorder originally suspected. The ophthalmoscope, in the hands of Dr. Musser and myself, was recently one of the means of leading to a diagnosis of hepatic coma, previously not clearly made out, which diagnosis I confirmed on the post-mortem table by finding an atrophic and cirrhotic liver, which weighed less than two pounds. I think there can be no doubt that the use of the ophthalmoscope is often quite as important as that of the thermometer or the stethoscope to the general practitioner.

DR. J. P. CROZIER GRIFFITHS: The case to which Dr. De Schweinitz has referred is still under observation in the hospital. The spleen is extremely large, filling the whole left side of the abdomen. When he was admitted to the hospital the proportion of white corpuscles to red was as 1 :4. A later examination showed the proportion to be 1 :25. In one case of purpura hæmorrhagica I have carefully examined the blood without finding any microörganisms. Culture experiments were not tried.

DR. J. B. WALKER: I would ask Dr. Musser if, in his first case, he used terebinthinate preparations to check the hæmorrhage? I have found, in cases of purpura hæmorrhagica, and in cases of other hæmorrhages from mucous surfaces, that the terebinthinates are very useful. These preparations seem to reach all mucous surfaces. I have seen several cases of severe hæmorrhage from the intestinal tract, threatening to be fatal, in which the bleeding was apparently arrested by the use of turpentine, after astringents had failed.

DR. S. SOLIS-COHEN: I have had an experience with a case of typhoid fever which apparently confirms what Dr. Walker has said. In this case purpuric spots appeared shortly before the occurrence of intestinal hæmorrhage. The use of turpentine, after the manner directed by Dr. George B. Wood, answered an excellent purpose. I have seen oil of turpentine, by inhalation and through the mouth, arrest hæmoptysis when ergot had failed.

DR. MUSSER: In simple cases of purpura iron has seemed of service. In the rheumatic cases salicylate of sodium may be employed. Turpentine had been fully tried in the case referred to before I was called. When I saw the patient, the stomach was so irritable that very little medicine could be given by the mouth. I used the wine of hamamelis, much diluted, and aromatic sulphuric acid, well diluted, but without effect.

Stated Meeting, October 12, 1887.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. VAN HARLINGEN read

NOTES ON THREE CASES OF LEPROSY.

He brought forward the notes of these cases with the purpose of pointing out the peculiarities of leprosy as it presents itself in the earlier and comparatively mild stages of the disease, and with the view of assisting, in some degree, in familiarizing the profession with its most numerous symptoms. The matter is one of practical importance, for there is no question, that the disease is on the increase in this country, and before long we may be called upon to decide what course is to be taken for the protection of the community, and, not less important, the care of the unfortunate victims of this disease. In addition to the fact that centres of leprosy exist in Canada, in Minnesota, in Louisiana, and in California, several cases have been reported as occurring *de novo* in American soil in persons who have been born in, and have never left the country. Under these circumstances it behooves each member of the profession to ascertain and make himself familiar with the appearance of leprosy, so as to be able to recognize it at sight, to make up his mind with regard to the contagious character of the disease, and, finally, setting aside all sentiment and ignorant fear of the malady, to do what can be done for its removal. Leprosy is, indeed, contagious in my belief and in that of the majority of observers; but contagious in a slow and uncertain manner. Therefore we need have no such fear in approaching it as we should have in coming in contact with syphilis, much less any of the contagious exanthemata.

DR. H. W. STELWAGON: I hesitate to express a positive opinion regarding a disease which I have seen so little clinically. Various views of the etiology of the disease have been held from time to time, and even at the present time these differences prevail. It was formerly charged to dietary and climatic influences, but these, as exclusive factors, have been disproven. Another view holds that its spread is due entirely to hereditary transmission, but a study of the affection has excluded this as a main etiological cause. Later opinions are that the disease is contagious through inoculation, a view that has much in its favor, but this, also, has been disputed by some writers who have been in position to study the disease. One fact, that appears to be against this view is, that in Norway where there are from two to three thousand lepers, the number of cases has been steadily decreasing for the last fifteen or twenty years. This decrease is due, it is true, in a measure, to the establishment of lazarettos, but not entirely so, for these contain not more than one-third of the whole number of lepers. At the present day, therefore, more or less doubt still exists as to the nature of this disease.

DR. W. OSLER: The questions with reference to the contagiousness or inheritance of leprosy are, of course, exceedingly interesting. Dr. Graham, of Toronto, has made an elaborate study of the disease as it occurs at Tracadie, New Brunswick, and has come to the conclusion that the disease is contagious, and that it is not transmitted by inheritance. There, as in Norway, the cases have been progressively diminishing in number. Certainly, if contagious, it must be so in a very slight degree. It is probably not nearly so contagious as ordinary tuberculosis.

DR. A. HEWSON: I have seen something of the anæsthetic form of leprosy, and recently resorted to a plan of treatment which I may say was suggested to me by the lecture of the President of the Society on Bergeon's use of gas, as in the treatment of phthisis. I resorted to this expedient in a case in which the bacilli were recognized in the skin. I applied the mixture of gases to various parts of the skin, especially the lobes of the ears, by means of inverted funnels, for twenty minutes each day. There was a perceptible reduction in the induration in the course of twenty-four hours, and at the end of ten or twelve days there was such an improvement that one would hardly have recognized him as the same patient. I may say in this connection, that I have been treating cases of keratitis with granular lids by means of these applications of the sulphuretted hydrogen and carbonic acid gases together. Within twenty-four hours there is such a reduction in the swelling and induration that the lids, which before could not be everted, can be examined without difficulty, and the presence of granular lids as the cause of the keratitis demonstrated. The application in all such cases proves acceptable to the patient by its characteristic sensation of gentle warmth to be felt in the part.

DR. VAN HARLINGEN: It may be said that as the cause of the disease lies in bacillar infection, anything that will kill the bacilli will probably benefit the patient. Dr. Unna, of Hamburg, from a study of certain cases, has come to the conclusion that a great deal of benefit is to be obtained by the application of certain agents which kill the bacilli. How far this method will prove effective I do not know. That it will prove effective in the anæsthetic form I very much doubt. The reason that a patient has

anæsthetic patches is not that the bacilli are in the skin, but that they are deposited in the nerves which supply these patches.

DR. WHARTON SINKLER read a paper on

MIGRAINE IN CHILDHOOD.

Migraine is more common in children than is generally realized. Popularly the attacks of "sick-headache," which many children have, are attributed to disorder of the stomach from some indiscretion in diet, and many physicians hold the same view. The fact that migraine is a disease especially likely to begin about the period of puberty has long been recognized, and this point has been insisted upon by Anstie. Many children begin to suffer from characteristic attacks as early as 7 or 8 years of age (Eulenberg speaks of a girl who suffered from excessively severe attacks from her fourth year), and continue to have them until adult life is reached; or, indeed, the attacks may continue all through life. Still, it is most often the case that when migraine begins in early childhood, it becomes more severe at puberty and ceases by the time full development is attained.

The influence of hereditation is seen to a marked degree in migraine, and the affection often seems to be directly handed down from one generation to the next. It is transmitted from parent to child, and may follow either the male or female line, descending from father to son or from mother to daughter. The children who suffer from migraine often belong to neurotic families, and it is common to find among the near relatives instances of other nervous disorders. It is, then, important for us to be on the lookout for migraine in children who belong to families of nervous tendencies. I have now under my care for sick-headaches a lad of 14 years, whose mother has violent attacks of neuralgia, and one of his sisters is a well marked example of hysteria. It is a well-recognized fact that children who suffer from this disease at and before the time of puberty may, in later life, become the subjects of some of the grave neuroses, such as epilepsy or insanity. The great value of the early recognition and cure of the disease is, therefore, apparent.

In addition to the influence of heredity, there are many other causes which may induce migraine in children. The manner in which a child is brought up has much to do with the production of these attacks. Improper food, bad atmosphere, and above all, an insufficient amount of sleep with overtaxing of the brain, all tend to predispose to or directly bring on migraine. When a child first begins school he often complains of more or less headache. The close air of the school-room and too little exercise are enough to account for some of these headaches.

In other children, mere mental effort brings on attacks of pain in the head. The same thing holds good of migraine that I have observed in chorea, namely, that it is the studious, ambitious children, who stand at or near the head of their classses, who suffer from both of these affections. In many instances there are ocular defects, which cause eye-strain, and in these cases the attacks of migraine continue to become more and more frequent in proportion as the eyes are used, until the eye-defect is corrected by glasses. It is not in all cases, however, that the headaches which follow excessive use of the eyes are due to ocular defect. Migraine from eye-strain is not uncommon in children. Dr. de Schweinitz has kindly furnished me with a case, which is also of interest on account of the superficial optic neuritis which exists.

Migraine does not appear to affect one sex more than the other, but if any difference does exist the preponderance is in boys. Precocious sexual development in either sex often leads to this form of headache. It is astonishing at what an early age evidences of sexual irritation may appear. Bad associations and influences lead a child into thoughts and practices that are unwholesome in the extreme, and bring about disorders of the whole nervous system. Even before puberty the nervous system undergoes a preparatory change, and if there be evil conditions in the surroundings of a child to excite sexual irritation, puberty is hurried forward. Under these influences a child becomes hypochondriacal and mopy, complains of various ailments—some of which are real and some fancied—and may suffer from real neuralgias. It is very seldom that we meet with migraine in robust and hearty children; but it is seen in those who do not get enough fresh air and who are thin and pale; or in children who think and read too much, and who do not romp and play, but prefer to sit with older people and drink in conversation far beyond their years.

The symptoms of migraine in young children are not far different from those in adults. The attacks are markedly paroxysmal, occurring from two to six weeks apart, and become more or less frequent, according as the conditions for their development are favorable or otherwise. There may be only one or two attacks a year. The attacks may be preceded by premonitory symptoms, such as chilliness, and a feeling of lassitude, and the child is dull, and indisposed to play. Sometimes there are subjective ocular symptoms in the form of specks floating before the eyes, muscæ volitantes, or balls of fire, and bright zig-zags. Occasionally the child complains of hæmiopia. These symptoms last a half hour or more, and may be followed by subjective numbness of the tongue, lips, or of the entire half of the body. Putnam[1] had a patient in whom in boyhood migraine was represented by repeated attacks of numbness and tingling of the right side of the face, and right half of the body, with aphasia, and hæmianopsia, followed by but trifling headache, or none at all. Later in life there were severe attacks of pain. Usually as soon as the subjective auras disappear the pain begins. At first the pain is dull, and it may be confined to one side of the head; generally, in children, the pain is on both sides of the head, at least they complain of the pain as being general, and it may be either frontal or occipital; most frequently it is frontal. Anstie says this is common of all neuralgias of children—*i. e.*, to be frontal, and to affect both sides simultaneously.

[1] System of American Medicine, vol. v, page 1231.

There is often nausea throughout the attack, or it may terminate in vomiting, or a free flow of urine, or sometimes there are two or three diarrhœic stools. After the crisis is reached the child may fall asleep, and after a nap waken well. The attack does not always terminate in a crisis; after a gradually increasing headache for several hours it gradually subsides. The face in the beginning of an attack may be pallid, and as the pain increases the face becomes deeply flushed, and the eyes suffused.

The treatment must be preventive and curative. If a child is of a neurotic family, in which there are already instances of neuralgia and migraine, we should urge the parents to see that he has as wholesome a life as possible. Insist on ten hours' sleep a night, and keep him from too prolonged application to his books. Six or seven hours of study in the twenty-four is enough for a growing child. Encourage outdoor sports of all kinds, and, if possible, keep such a child in the country for many months in the year. The diet should be abundant and nutritious, milk, eggs, soups, and broths, with meat in moderation, and the various cereals, and plenty of vegetables and fruit. Such children can eat largely, and plenty of fatty articles of food is well borne and is of great advantage. There is a great tendency, in the education of both girls and boys, to overcramming, and to over-stimulation, to reach a high educational standard; but it is encouraging to see the effort which is now being made in our schools to vary and widen the course of study. The introduction of manual art into the public schools is of inestimable value to the children, not only because it gives them dexterity and skill in the use of the hands which becomes of practical advantage later in life, but it trains the minds in studies which are, so to speak, external in their kind, As physicians, we cannot too strongly discourage the taking of young children to the theatres, when, not only the late hours and bad air are injurious, but the impressions produced by the plays must be pernicious to an extreme. One cannot go to the theatre now without seeing children of all ages looking on at every variety of performance, from the most decolleté spectacular ballet to a melodrama of the highest intensity.

If a child has already begun to have attacks of migraine, nothing is of more value than attention to the general health. Such children are often pale and thin, and have but little appetite. If change of air can be secured, it is often enough to obtain relief from the attacks. If we cannot send the patient away, we must resort to tonics and good feeding. Cod liver oil, if it can be borne by the stomach, is of the greatest possible use in such cases. If the child cannot take oil, we must introduce fat into the system in some other way. Cream and plenty of butter may be given. Devonshire clotted cream, which is now to be obtained at the Alderney dairies, is relished very much by children.

Special anti-neuralgia drugs are seldom indicated in these cases, but sometimes the bromides may be given with great advantage, especially in those children who are of a very nervous temperament, and in whom any effort at brain-work causes headache. It should be given in small doses, and continuously for some weeks.

In many cases some ocular defect will be found which will require correction by glasses, and many cases of migraine in children have been cured by this means alone. In all cases of migraine we should look carefully into the condition of the teeth, and have any unsound ones filled or removed.

Dr. C. M. Seltzer said: I wish that the author had been more explicit with reference to the dietetic treatment of these cases. I infer from his remarks that the majority of his patients have been underfed. Most of the cases that I have observed have had an excess of nitrogenous articles, with a lack of sufficient vegetable food. I have obtained the best results by limiting the quantity of nitrogenous food, especially in children, and by increasing the quantity of butter, cream, and fatty articles. I give light suppers, secure abundant sleep, and moderate exercise, especially in gymnastics. Treated in this way, but little medicine is required.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Colorado Springs and Davos Platz—Beneficial Effects of Evergreen Forests.

At the second October meeting of the New York Academy of Medicine Dr. Clinton Wagner, who by special experience is well qualified to speak upon the subject, read a paper devoted to a comparison of Colorado Springs and Davos Platz as winter health resorts. The change that had taken place in the opinions of a considerable proportion of the profession since the time, a few years since, when warmth and equability were universally regarded as the essential characteristics of a climate adapted for the treatment of phthisis, was forcibly shown, he said, in the present popularity of these two resorts, at one of which, Davos, there was snow on the ground fully half the year, and at the other, Colorado Springs, there was sometimes a difference of 130° between the temperature in the sun during the day and the night temperature.

Having described the most prominent features of the two places, he proceeded to point out the differences between them, the advantage being almost always on the side of the American resort. Thus, while at Colorado Springs there was an average of 28 good days in the month, at Davos there were only 20. At Colorado Springs there were 8 hours of sunshine in the day; at Davos 4½. At Colorado Springs the invalid could indulge in riding, driving, tennis, picnics, etc.; while at Davos the outdoor diversions were confined to skating and tobogganing, which involved too violent exercise for many patients. At Colorado Springs he could enjoy the comforts and advantages of home life, if he preferred; while at Davos he was compelled to stay in a hotel; and it was well known that hotels frequented by

many phthisical patients always partook more or less of the character of hospitals and were depressing in their influence. At Colorado Springs the patient could remain throughout the year; but at Davos he was obliged to leave early in the spring, on account of the dampness from the melting snow.

At Davos, Dr. Wagner went on to say, the hotels were excellent, and there was plenty of amusement. Formerly the drainage of the place had been very defective; but within the last few years a most efficient system of drainage (said to be the best in Europe) had been introduced. As much could not be said for Colorado Springs, where there was at present no public system of drainage whatever; cesspools and old-fashioned privies being still in use. The principal hotel, however, was very well drained, and he understood that a complete system for the town was now in contemplation. With the natural facilities of the place for good drainage he had no doubt that it could be made very perfect. On the whole, he would say that while Davos was unquestionably the best high altitude health resort in Europe, the advantages of Colorado Springs were greatly superior in very many respects.

Moreover, there were at Manitou conditions very similar to those at Davos, although it was at an altitude more than a thousand feet greater, and the shortest days for the invalid were six hours in length. It was well sheltered from the winds, and also possessed some excellent mineral springs. At present, however, it was comparatively deserted in winter.

In the discussion which followed the reading of the paper Dr. Alfred L. Loomis said the climatic treatment of phthisis was deservedly growing more and more in favor. From his studies in connection with this subject he had learned to recognize that two things were absolutely essential for a curative effect to be produced; and the first of these was a pure atmosphere, an aseptic atmosphere, if one chose to call it so. Pure air could be taken into the lungs on the same principle that antiseptics were displayed in external disease and in surgical cases. He did not think it was possible to treat tuberculous cavities with antiseptic solutions, and doubted whether inhalations or other forms of applying antiseptic agencies had any real effect upon the lungs. But if we could keep these organs bathed in an aseptic atmosphere we were doing all that was in our power to arrest the disease. Under the beneficial influences of such an air the temperature became reduced and distressing nervous symptoms were relieved. This element must be sought for in whatever locality was selected for the patient. Purity of air was naturally to be expected in high altitudes; but the density of the population and various other circumstances might cause its contamination to a greater or less extent. He had no doubt that the air of Colorado Springs and Davos had originally been aseptic; but since they had been crowded with hotels and consumptives he feared that this was no longer the case, and he believed that the benefit of residing at these places places would grow less and less until they would finally be altogether abandoned as health resorts.

The second essential for a curative effect was the presence of conditions conducive to outdoor life. It was simply folly, he thought, for a phthisical patient to go to any resort and spend twenty hours out of the twenty-four shut up in a hotel or boarding-house. It was much better that he should remain at home, for if he were not well enough to take outdoor exercise, he was not well enough to be sent to these places. This was why those in the first stage of phthisis were so often relieved; and the reason that those with cavities lived was because they went to the health resort in a condition enabling them to spend their time out of doors. It was, however, not necessary to go to Colorado to find a pure air; and, besides, he did not believe that high altitude of itself was of the slightest practical importance. The great desideratum was purity of atmosphere; but as it was desirable that the patient should be in the sun as much as possible, Colorado Springs was to be preferred to Davos. As regards recovery in these places, if the patient did not remain in them for two or three years after all trouble had disappeared, the disease was almost certain to redevelop within a few months. This was the great objection to high altitudes for consumptives, and he thought it possible to secure a perfectly pure air at a lower altitude; and that, too, much nearer home.

The President, Dr. Jacobi, having remarked that no reference had been made to ozone, which was claimed to be an important element in the climatic treatment of phthisis, and was found among mountains and evergreen forests, as well as near and on the sea, Dr. Loomis spoke of the beneficial effect of antiseptic emanations, and said that many places which were not naturally aseptic were rendered so by such emanations, especially those from evergreen forests.

Dr. R. P. Lincoln said that of late there had been a considerable change in professional opinion as to the advisability of sending patients suffering from laryngeal phthisis to high altitudes, and that Dr. Solly, of Colorado Springs, had informed him that he had known three cases of this variety of the disease to recover at that resort.

In closing the discussion Dr. Wagner stated, in answer to Dr. Loomis, that he saw no reason why a patient should not be taken to Colorado Springs even if he were not strong enough to take exercise. The journey could now be made with comfort in a comparatively few hours, and when he arrived he could sit or ride out in the open air, an advantage which was not available at Davos.

At this meeting of the Academy it was voted to form a separate Section of Diseases of Children, the petition for the formation of such a Section being signed by Drs. J. Lewis Smith, O'Dwyer, and others interested in pediatrics. P. B. P.

THE SUDDEN DEATH OF DR. J. E. CHANDLER.

REPLY TO DR. H. C. MARKHAM, OF INDEPENDENCE, IOWA.

Dear Sir:—The facts reported concerning Dr. Chandler's disease are too meagre to warrant a positive expression of opinion as to the cause of his

death. There are, however, certain considerations which may serve to throw light upon the abrupt termination of his malady. Aside from sunstroke, lightning and other forms of traumatism, the causes of instantaneous dissolution may be put down as hæmorrhage into the medulla and paralysis of the heart or, in other words, arrest of the heart in diastole. Bulbar hæmorrhage, sufficient to promptly destroy life, must be so copious as to involve the respiratory or cardiac centres, or both; and such a hæmorrhage is extremely rare in the young, and even in the aged is not common. Disease of the blood-vessels of the part is for the most part essential to its occurrence, and degenerative weakness of the arterial coats is rare in individuals under 40, except from syphilis or prolonged vascular strain in cases of aortic regurgitation. Yet, death from bulbar hæmorrhage is so exceptional, even in cases which present the requisite cardiac and vascular conditions, that, even granting the existence of aortic insufficiency in the case of Dr. C., the probabilities would be against his death from extravasation of blood into the medulla.

When bulbar embolism is the cause of such hæmorrhage, death is usually preceded by well marked symptoms referrable to a profound centric lesion, and Dr. C. is reported to have fallen to the floor and died without the utterance of a sound. Consequently, our inquiry is limited to that other and not infrequent cause of sudden death, abrupt failure of the heart. Here we are at once confronted by two considerations, first, that Dr. C. was supposed to have mitral regurgitation, secondly, that his disease was not thought to present symptoms of special gravity. As to the former, as is well known, the usual cause of death in mitral disease is gradual failure of the right side of the heart, and not sudden diastolic paralysis of the left ventricle. This latter occurs when compensatory hypertrophy has yielded to dilatation, commonly in cases of fatty degeneration or over distension of the ventricular walls from the force of the regurgitant blood in aortic incompetence. There was no autopsy in the case of Dr. C. and hence our knowledge as to the exact nature of his heart-disease, rests on the report of a mitral systolic murmur. If one were inclined to be captious, he might doubt the correctness of this diagnosis, if—as is commonly the case—ausculation had been made with the unaided ear and through a portion of the clothing. Under such circumstances, a loud systolic murmur heard throughout the præcordia and preceded by a faint first sound, might be mistaken for a mitral systolic murmur, and the first sound for the second sound. Had this been the actual state of affairs, his sudden death after the exertion of pulling a tooth might be readily understood.

Granting, however, that his disease was in reality mitral regurgitation, his sudden death is not wholly inexplicable; but it must presuppose greater cardiac feebleness and ventricular dilatation than appear to have been recognized. Four weeks prior to his death he complained of symptoms referrable to hepatic engorgement, which, although they yielded to treatment, were followed by debility. It is not uncommon for patients with heart-disease to refer their symptoms to some other organ than the one mainly affected. Furthermore, the Doctor was an energetic man, very likely to perform his daily duties without complaint. Hence it is reasonable to assume that his condition was far graver than he himself would admit or others recognize. It is probable, therefore, that compensation had been ruptured and grave dilatation established. In this condition of the heart the physical exertion of pulling a tooth could, by occasioning sudden increase of the arterial tension through muscular contraction and expiratory increase of the intra-bronchial atmospheric pressure, cause a degree of ventricular over-distension from which the weakened heart could not recover.

Although such a sudden death is rare in mitral disease, it is not unknown. I have myself lost a patient, the subject of mitral disease, in this way. She sat up in bed to drink a cup of tea and suddenly fell back upon her pillow dead.

ROBERT H. BABCOCK, M.D.
70 Monroe St., Room 29, Chicago.

OPIUM INEBRIETY AND INFANTILE MORTALITY.

Dear Sir:—I am desirous of obtaining facts regarding the relation of opium inebriety in mothers to infantile mortality.

Dr. Frank B. Earle, of Chicago, informed me that he "recently attended a woman taking about twelve grains of morphia daily, who has lost four successive babies between the second and fourth day, all having died in collapse." If any reader of your journal will furnish me details of a similar case, I will much appreciate his courtesy and give him full credit.

J. B. MATTISON, M.D.
314 State St., Brooklyn, N. Y.

BOOK REVIEWS.

A PRACTICAL TREATISE ON DISEASES OF THE EYE. By DR. EDOUARD MEYER, Professor à l'école Pratique de la Faculté de Médecine de Paris, Chevalier of the Legion of Honor, etc. Translated, with the assistance of the author, from the Third French Edition, with additions as contained in the Fourth German Edition, by FREELAND FERGUS, M.B., Ophthalmic Surgeon Glasgow Royal Infirmary, Assistant Surgeon Glasgow Eye Infirmary. With 267 illustrations and 3 colored plates. 8vo, pp. 647. Philadelphia: P. Blakiston, Son & Co. 1887.

Dr. Meyer's book is so generally recommended and employed in Germany and France that it is considered the student's text book "par excellence." It has gone through several French and German editions, has been translated into Spanish, Polish, Russian, Italian and Japanese languages. We are indebted to Dr. Fergus for an English translation, which lies before us. Its general arrangement does not differ materially from that usually adhered to by text-book writers. Every subject is discussed in

a clear and concise manner. The work is abreast of the times. Its value is enhanced by the truly excellent wood cuts, which greatly assist in elucidating the text. We do not hesitate in prophesying that the hope expressed by the author will be realized, that "the English edition will prove useful, and find favor with English-speaking confrères and students on both sides of the Atlantic."

RECTAL AND ANAL SURGERY, with a Description of the Secret Methods of the Itinerants. By EDMUND ANDREWS, M.D., LL.D., Professor of Clinical Surgery Chicago Medical College, Senior Surgeon Mercy Hospital; and E. WYLLYS ANDREWS, A.M., M.D., Adjunct Professor Clinical Surgery Chicago Medical College, Surgeon to Mercy Hospital. With original illustrations. 8vo, pp. 112. Chicago: W. T. Keener. 1887.

Dr. Andrews is so well known to the readers of this journal, by his frequent and most practical communications, that he needs no introduction to them, and little need be said in regard to the volume before us. It is eminently practical and clear; is comprehensive and interesting. In the preface Dr. Andrews gives a history of the itinerant system, or of the "Piles Doctors" of the country. The subject matter is considered in the following chapters:

"Examination of the Rectum;" "Hæmorrhoids;" "Fistula in Ano—Abscess and Sinus;" "Fissure and Rectal Ulcers;" "Prolapse of Rectum;" "Polypus and other Benign Growths;" "Mechanical Obstructions;" "Malignant Tumors;" "Malformation and Pruritis Ani;" "Mechanical Injuries." The book can be heartily recommended, and especially for its practical character.

MISCELLANEOUS.

SHYLOCK IN CHINA.—Dr. W. Morrison, of Shanghai, China, states that he was called upon to attend a young man whose eyes had been punctured because his father was unable to satisfy the claims of a creditor; on making inquiries, he was informed that the punishment was not uncommon in the district, and that deaths occasionally resulted.

$250 PRIZE; COMPETITION OPEN TO ALL THE WORLD.—The first award under the William F. Jenks Prize Fund, of The College of Physicians of Philadelphia, will be made by the Committee, for the best essay upon the "Diagnosis and Treatment of Extra-uterine Pregnancy," as soon after January 1, 1889, as may be practicable. Papers for competition must be written in English, and be presented by the said date. The prize essay is to become the property of the College. By order of "The Committee of the William F. Jenks Prize,"

ELWOOD WILSON, *Chairman*.
1517 Walnut St., Philadelphia, Pa., U. S. A.

THE DEMAND FOR A THREE YEARS' COURSE OF LECTURES and medical study is becoming so great that it can soon be no longer ignored even by schools which are ambitious of the largest possible classes. Recently the Executive Committee of the Alumni Association of Jefferson College adopted the following resolution:

WHEREAS, It having come to the knowledge of this Executive Committee of the Alumni Association that four students have gone to the University of Pennsylvania to pursue their medical education, at the recommendation of the Alumni of this College on the ground that Jefferson Medical College did not provide a three years' graded course, and did not furnish clinics or instruction on the special branches of medicine and surgery. Be it

Resolved, That the Executive Committee, having the best interest of our Alma Mater at heart, respectfully announce these facts to the Faculty, that they may take such action as they deem best to overcome this apparent growing dissatisfaction of our Alumni.—*Medical Record*, Nov. 12, 1887.

NEW BOOKS RECEIVED.

Operative Surgery on the Cadaver. By Jasper Jewett, Germany. New York: D. Appleton & Co.

Functional Nervous Diseases, their Causes and their Treatment. Memoir for the concource of 1881–1883. Academie Royale de Medicine de Belgique. With Supplement on Anomalies of Refraction and Accommodation of the Eye and Ocular Muscles. By G. T. Stevens. New York: D. Appleton & Co.

The Principles of Theoretical Chemistry, with Special Reference to the Condition of Chemical Compounds. By Ira Remsen. Third Edition, Enlarged and thoroughly Revised. Philadelphia: Lea Brothers & Co. 1887.

Transactions of the Association of American Physicians, Second Session, held at Washington, D. C., 1887.

Natural Law in the Business World. By Henry Wood. Boston: Lee & Shepard. Price 30c.

Rectal and Anal Surgery. By Edmund Andrews, M.D., LL.D., and E. Wyllys Andrews, A.M., M.D. Chicago: W. T. Keener.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S ARMY, FROM NOVEMBER 5, 1887, TO NOVEMBER 11, 1887.

Major Chas. R. Greenleaf, Surgeon, par. 8, S. O. 248, A. G. O., October 25, 1887, directing Surgeon Greenleaf to visit the recruiting depots and rendezvous at certain places, is amended to include Davenport, Ia.; Quincy, Ill.; and Evansville, Ind. S. O. 257, A. G. O., November 4, 1887.

Capt. Leonard Y. Loring, Asst. Surgeon, ordered for duty at Ft. Morgan, Ariz. Ter., upon the expiration of his present sick leave of absence. S. O. 258, A. G. O., November 5, 1887.

Capt. Harry O. Perley, Asst. Surgeon, now on duty at Ft. Wayne, Mich., ordered for temporary duty with troops stationed at Highwood, near Chicago, Ill. S. O. 258, A. G. O., November 5, 1887.

First Lieut. F. J. Ives, Asst. Surgeon, granted leave of absence for one month, to take effect on or about the 15th inst. S. O. 113, Dept. Platte, November 5, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING NOVEMBER 12, 1887.

Surgeon T. C. Heyl, detached from the "Marion," proceed home and wait orders.

P. A. Surgeon T. C. Craig, detached from the "Marion," proceed home and wait orders.

Medical Inspector H. M. Wells, detached from the "Trenton," proceed home and wait orders.

Medical Director Geo. Peck, ordered to Washington, D. C., as member of Examining Board.

Surgeon Jos. G. Ayres, ordered to the "Galena," to relieve Surgeon F. L. DuBois.

Surgeon F. L. DuBois, detached from the "Galena," proceed home and wait orders.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING NOVEMBER 12, 1887.

Surgeon Walter Wyman, to proceed to Louisville, Ky., and Memphis, Tenn., as inspector. November 2, 1887.

P. A. Surgeon F. M. Urquhart, relieved from duty at Cape Charles Quarantine; ordered to Norfolk, Va. November 6, 1887.

Asst. Surgeon G. M. Magruder, when relieved, to rejoin station at Chicago, Ill. November 3, 1887.